



**air-lux®**  
No Compromise.

Technical  
documentation



# Official Partner

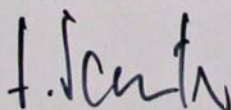
## Certificate

This certificate confirms that

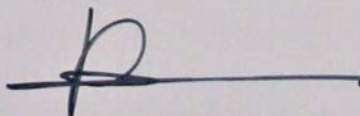
### AUB Limited

fulfills all standards and criteria required of an official air-lux partner.  
Every air-lux partner understands and shares our commitment  
to highest quality standards – consistently and without compromise.

Engelburg, Switzerland, April 2018



Heinz Sauter  
Owner, CEO



Lukas Knechtle  
Deputy Managing Director



# air-lux® the frameless glass façade system that defies the elements.

air-lux is a floor-to-ceiling glass façade system with large surface sliding window and an unique air-assisted sealing concept. The maintenance-free air-lux solution with sliding casement windows up to 18m<sup>2</sup> was developed by Krapf AG, a leading Swiss metal and façade engineering company and complete service provider for quality solutions. With air-lux, Krapf AG offers architects, façade planners and building owners a versatile window façade system that is as architecturally and aesthetically appealing as it is structurally sound. air-lux installations are designed, engineered and manufactured in Switzerland. Since the first installation in 2004, over 5,000 sliding casement windows have been installed world-wide.

## AUB the new air-lux partner

AUB Ltd. is providing Door Access Solutions for Commercial, Institutional and Residential projects in Hong Kong and Macau. Our Products & Solutions including Automatic Doors, Windows & Entrance, Hardware & Interior Doors, Security Gates, Access Control and Industrial Doors. Service is our Value - we provide Technical Advice & Customized Drawings, Ironmongery Schedules, Master Key Plans, Supply & Installation, Contracting, Training and Service & Maintenance programs and Sourcing. AUB is closely working with façade consultants, contractors and engineering companies providing solutions for all type of high- and low-rise commercial and residential buildings.

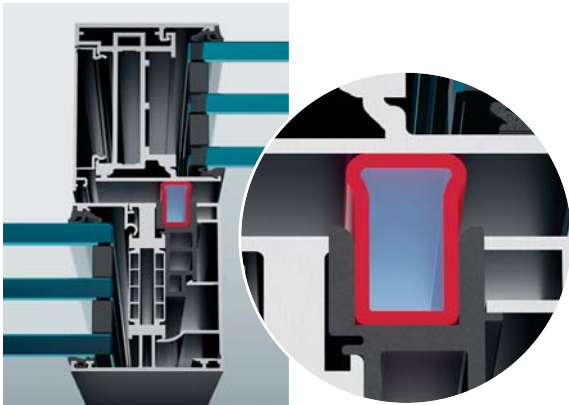
Our partnership aims to bring unrivaled technology and exceptional features to the densely populated territory of Hong Kong and Macau. The innovations in Noise Reduction, Security as well as Impermeability of Rain and Air will enhance the living standard and the experience of space.



# 100% Impermeability

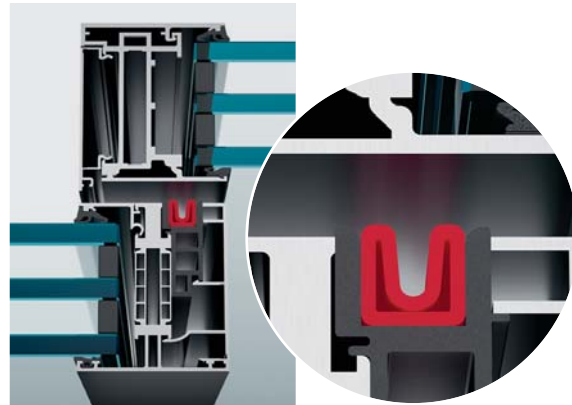
With the patented, air-assisted sealing system, air-lux sliding windows guarantee outstanding construction qualities. The circumferential ring seal ensures 100% tightness when the window closed.

## Sealing with air - the air-lux sealing concept



Seal active

With the press of a button, air is introduced into the frame. This closes the gap between the slider and the fixed frame, creating a perfect seal.



Seal inactive

To open the unit, the button is pressed a second time. The air is released and the seal retracts to its original concave profile.



# Data Sheet

**air-lux®**

**Model :173**

## EN Standard



**Air Permeability**  
Classification under Standard  
EN 12297 : 1999-11

**Class 4**



**Driving Rain Impermeability**  
Classification under Standard  
EN 12208 : 1999-11

**Class E1500**



**Wind Loading**  
Classification under Standard  
EN 12210 : 1999-11 /AC:2002-80

**Class C4/ B4**  
1600 Pa, max.2400 Pa  
Typhoon proof beyond 5Kpa



**Required Operating Forces**  
Classification under Standard  
EN 133115 : 2001-07

**Class 1**



**Heat Insulation**  
Classification under Standard  
EN 10077-1  
0.92W / m<sup>2</sup> K, U<sub>g</sub> 0.6W / m<sup>2</sup> K

**U<sub>w</sub> Parameter /per property**  
0.83W / m<sup>2</sup> K, U<sub>g</sub> 0..5W / m<sup>2</sup> K



**Burglar- proofing**  
Resistance Classes WK2/RC2  
WK3/RC3

**Sliding window Height up to 3m**



**Noise Insulation**  
Property-dependent up to 44 dB,  
also dependent on size of window  
element/delection of glass quality

## US Standard



**Air In filtration Resistance**  
Classification under Standard  
ASTM E283-04

0.00 cfm/ft<sup>2</sup> @ 300Pa (6.24psf)



**Water Resistance**  
Classification under Standard  
ASTM E331-09 Uniform Pressure  
ASTM E547-09 Cyclic Oressure

No Entry @ 958 Pa (20psf)  
No Entry @ 958 Pa (20psf)



**Durability**  
Classification under Standard  
Uniform Structural Load  
Design Pressure  
ASTM E330-02 (10)

+/- 2394 Pa(+/- 50psf)  
+/- 3591 Pa(+/- 75psf)

**Deglazing**  
ASTM E987-88(09)

No Damage



**Operating**  
Classification Under Standard  
ASTM E2068

12.4 lbf initial/ 13.8 lbf to maintain



**Isolations value**  
Classification Under Standard  
NFRC Model Size Glazed Wall System  
NFRC Model Size Sliding Glass Door

0.18 Btu/hr.sqft. °F(1.02W/m<sup>2</sup>K)  
0.24Btu/hr.sqft. °F(1.36W/m<sup>2</sup>K)



**Burglary Protection**  
Classification under Standard  
ASTM F842-04 Forced Entry

No Damage @ Grade 10



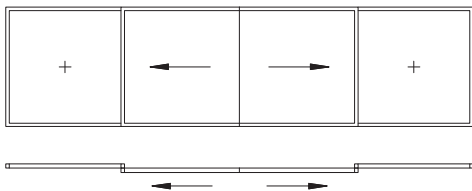
**Bullet-proof**  
Special designs up to  
Resistance class BR4-NS



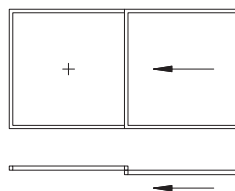
# Opening options



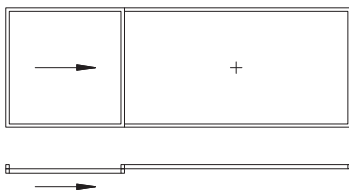
2 central casements (with vertical abutting fully glazed pane)



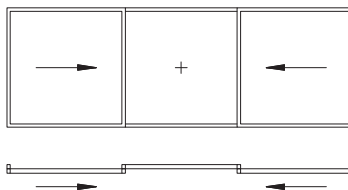
1 right sliding casement with 1 right fixed pane



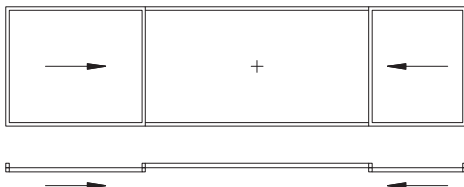
1 left sliding casement with 1 right fixed pane (variation)



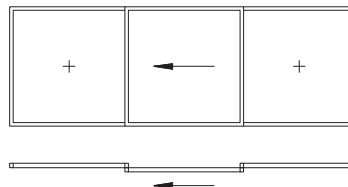
2 external casements sliding left and right over 1 central fixed pane



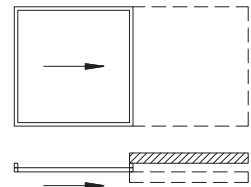
2 external casements sliding left and right over 1 central fixed pane (variation)



1 central casement sliding left over the left of two left and right fixed panes

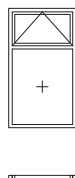
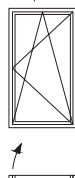
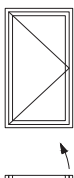


1 left casement sliding right superimposing the exterior masonry

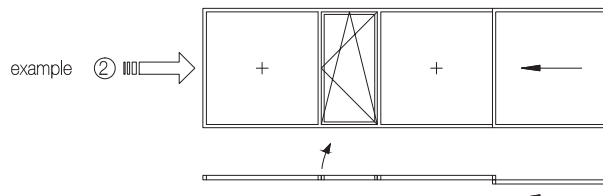


Openable elements can be combined with air-lux fixed panes

- ① Swivel-opening door    ② Swivel-opening- and pivot-hung ventilation light    ③ pivot-hung casement



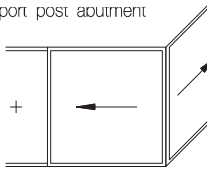
- example ② → 1 right casement sliding left over the right central fixed pane together with 1 left central swivel-opening casement and 1 left fixed pane



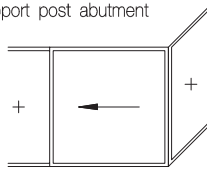
# Opening options



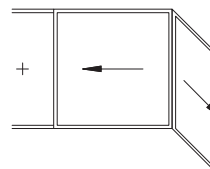
Exterior cornering with support post abutment



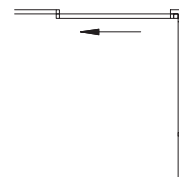
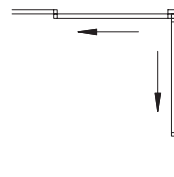
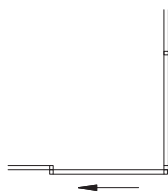
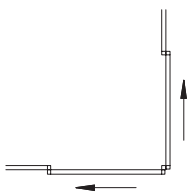
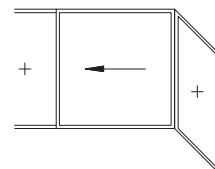
Exterior cornering with support post abutment



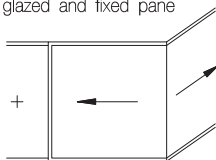
Interior cornering with support post abutment



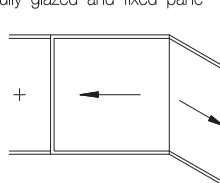
Interior cornering with support post abutment



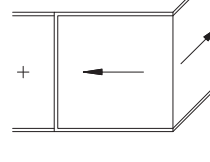
Exterior cornering "special angled" fully glazed and fixed pane



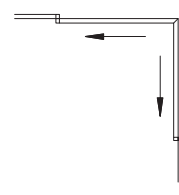
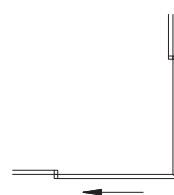
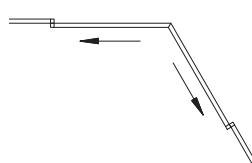
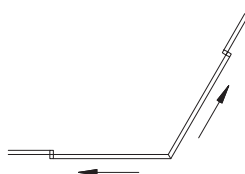
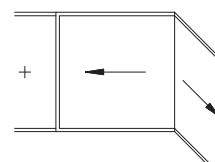
Interior cornering "special angle" fully glazed and fixed pane



Exterior cornering with fully glazed pane



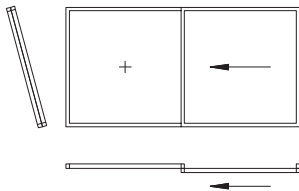
Interior cornering with fully glazed pane



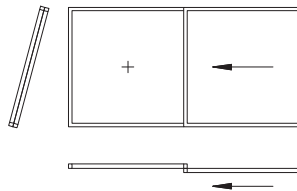
# Opening options



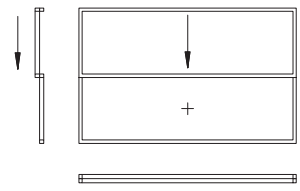
Sliding casement "outward slanted" and fixed pane



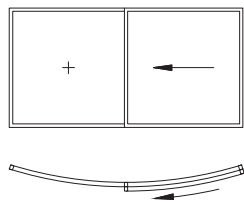
Sliding casement "inward slanted" and fixed pane



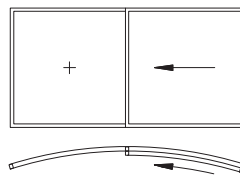
Sliding casement "top down" and fixed pane



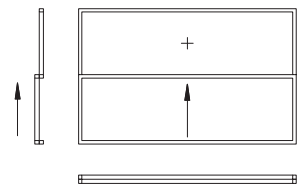
Sliding casement "outward curved" and fixed pane



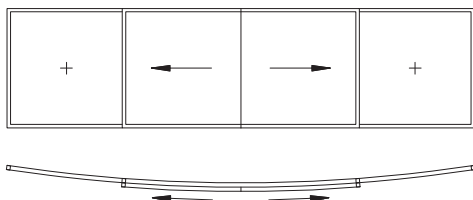
Sliding casement "inward curved" and fixed pane



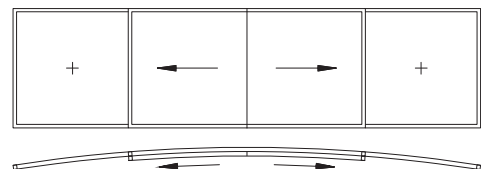
Sliding casement "bottom-up" and fixed pane



2 central casements "outward curved" (with vertical abutting fully glazed pane)

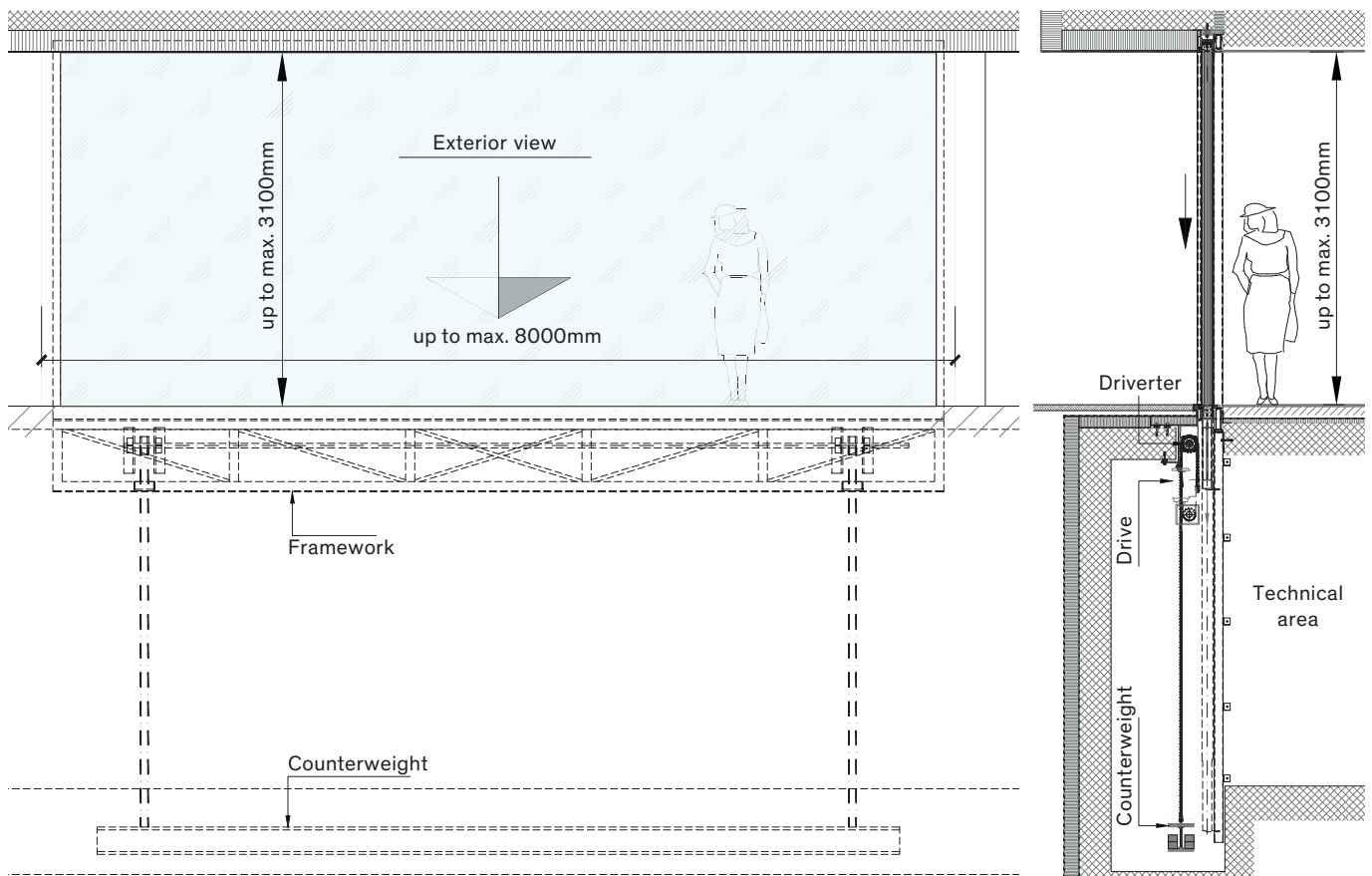


2 central casements "inward curved" (with vertical abutting fully glazed pane)

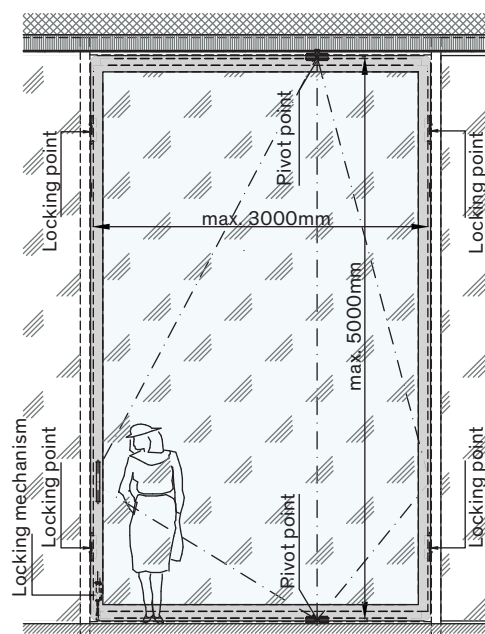
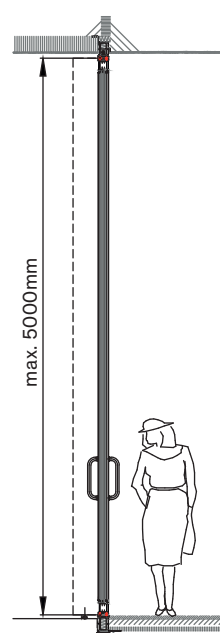
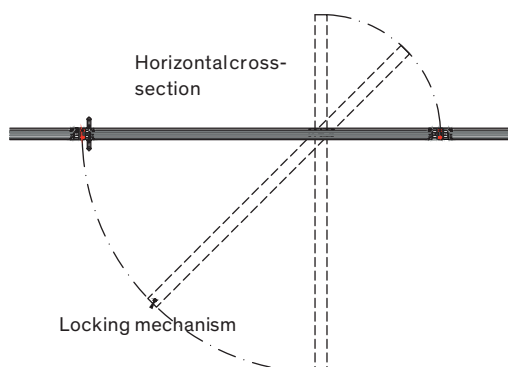
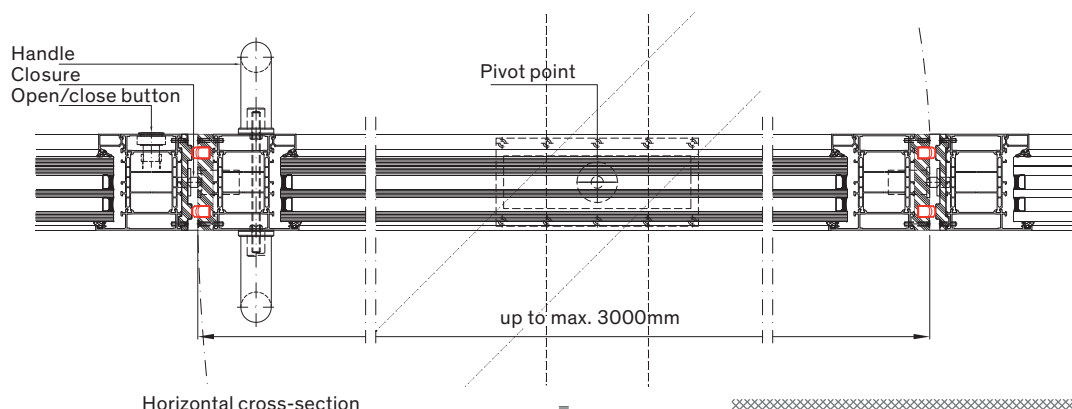




# Descending window



# Pivot door



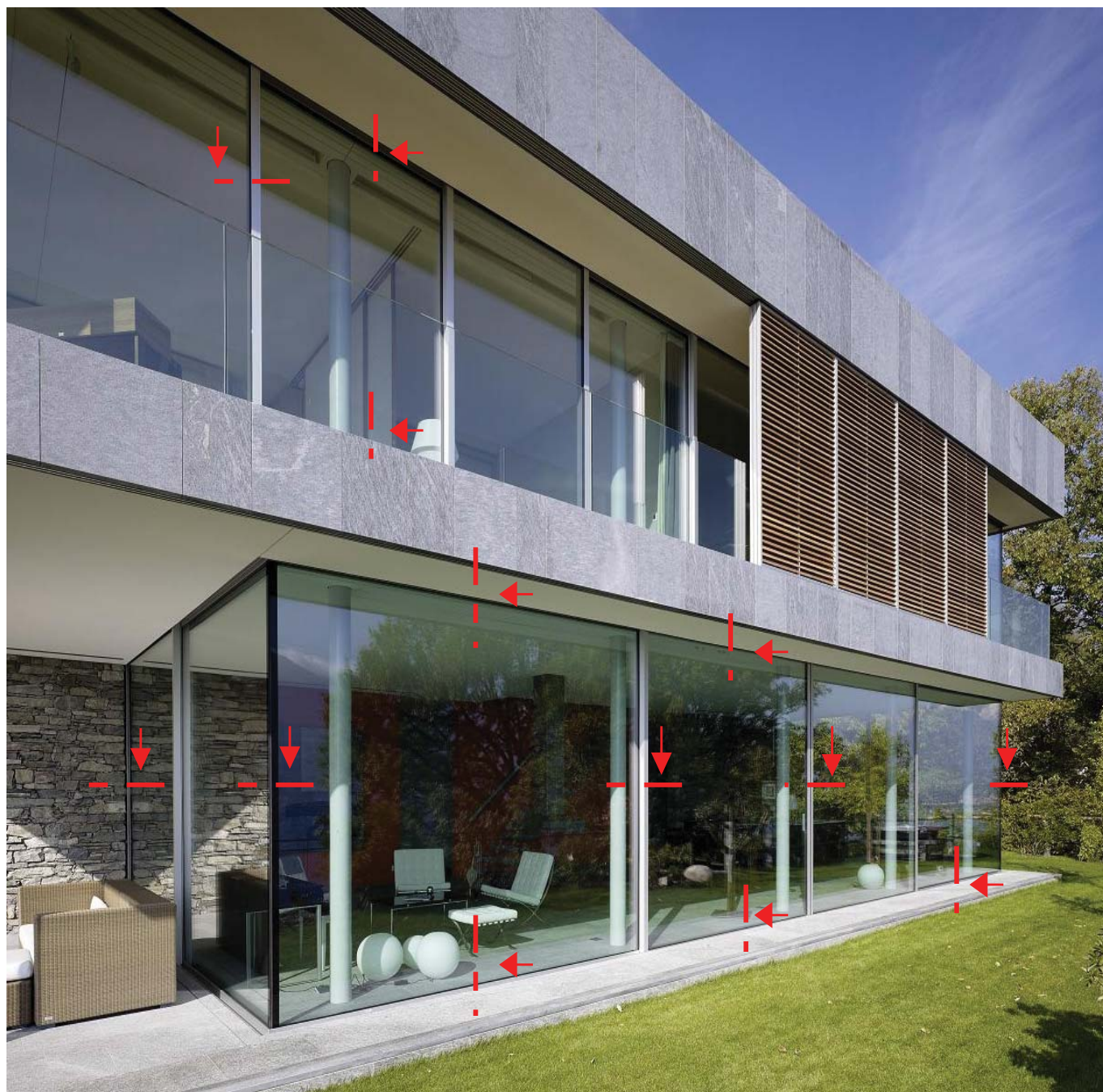


**air-lux®**

**System Details**

# Sliding Win- dows

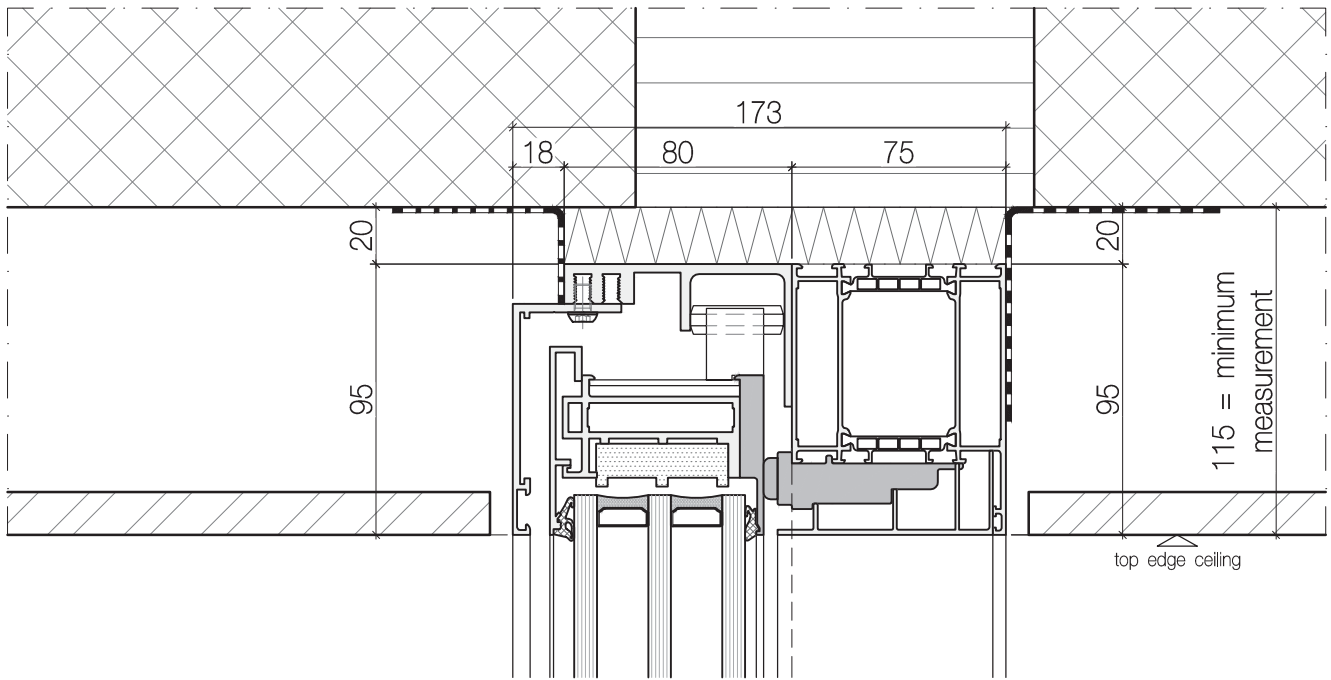
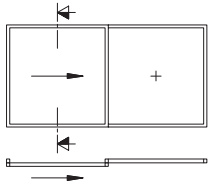
**Vertical & Horizontal  
Sections**





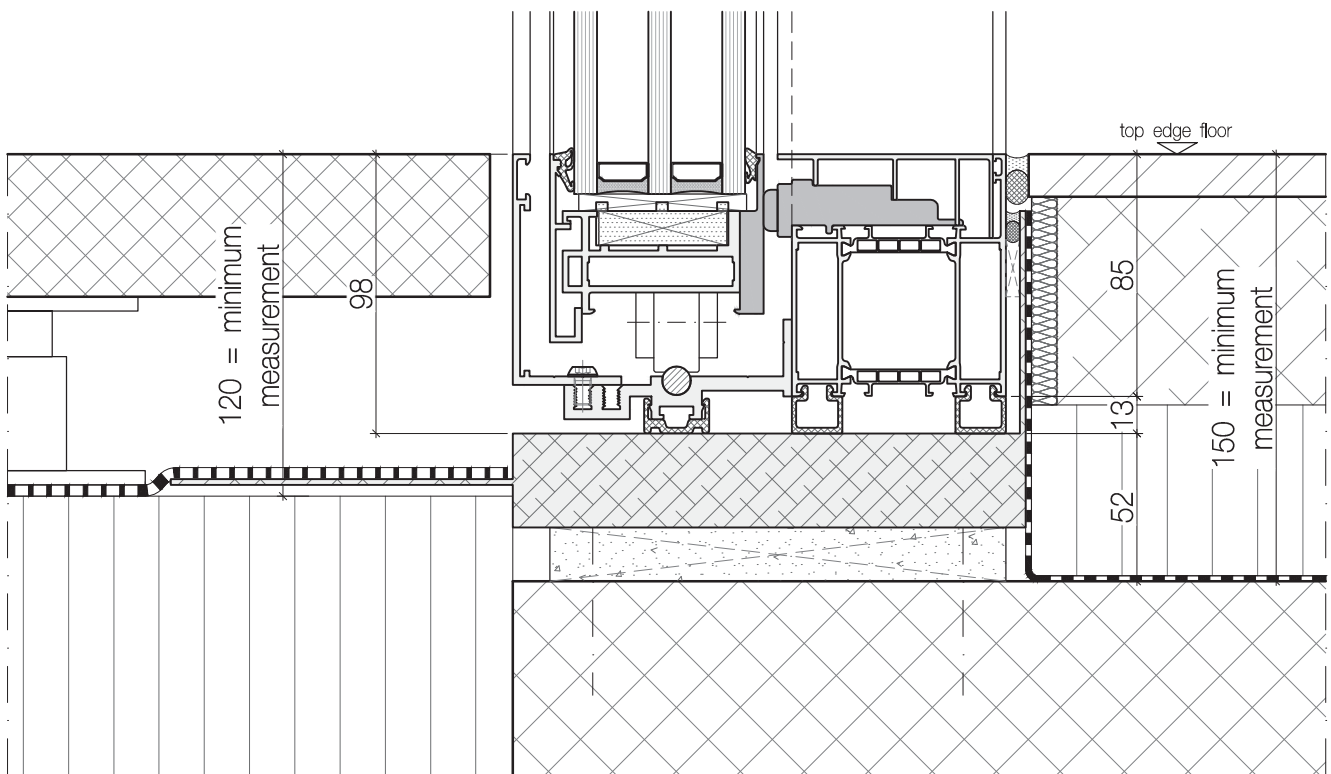
# Vertical sections

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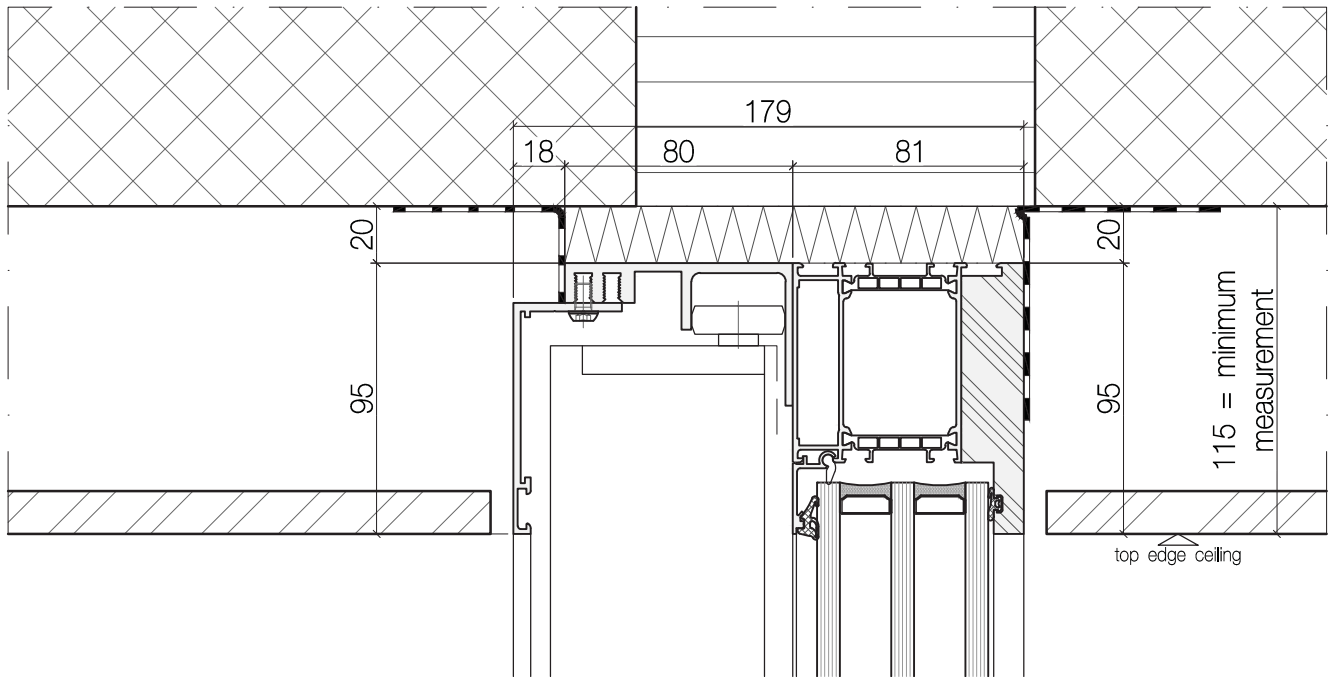
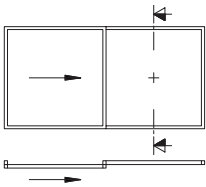
Exterior

Interior



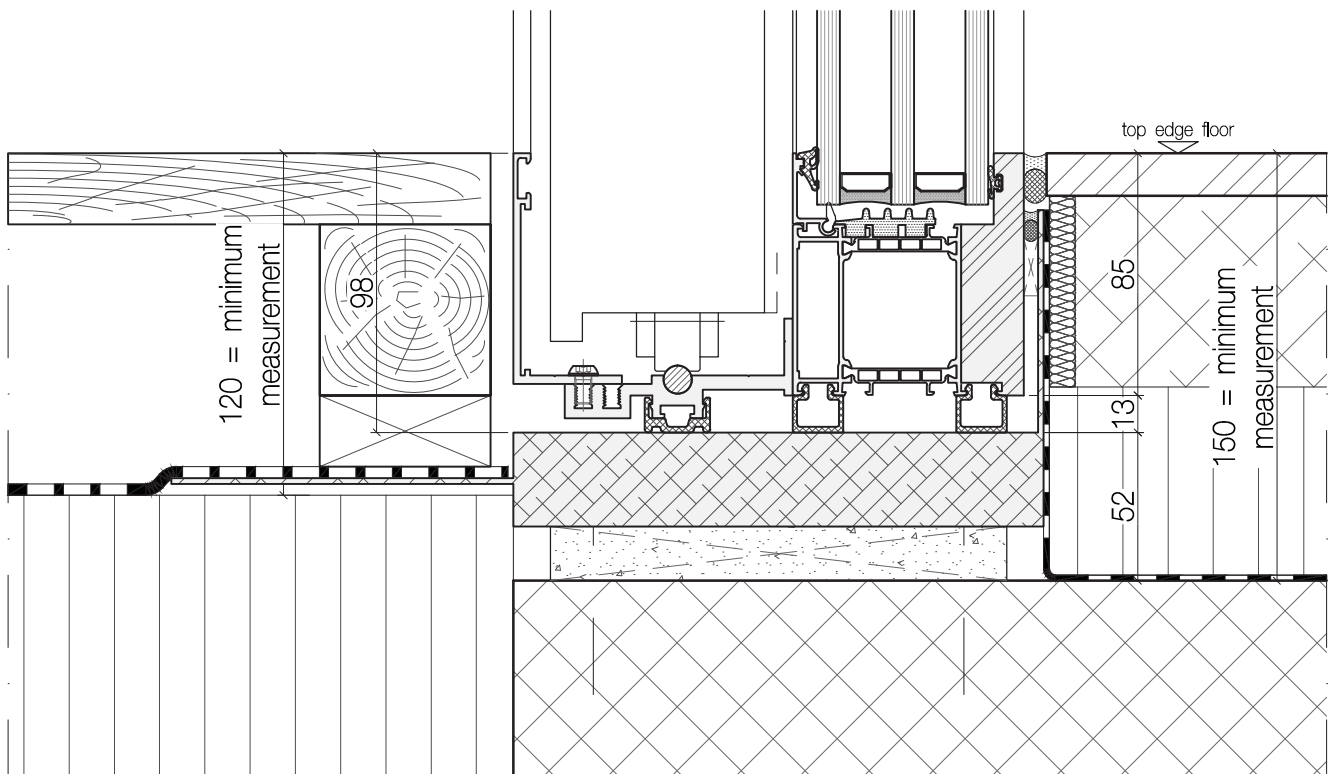
# Vertical sections - Wood Connect

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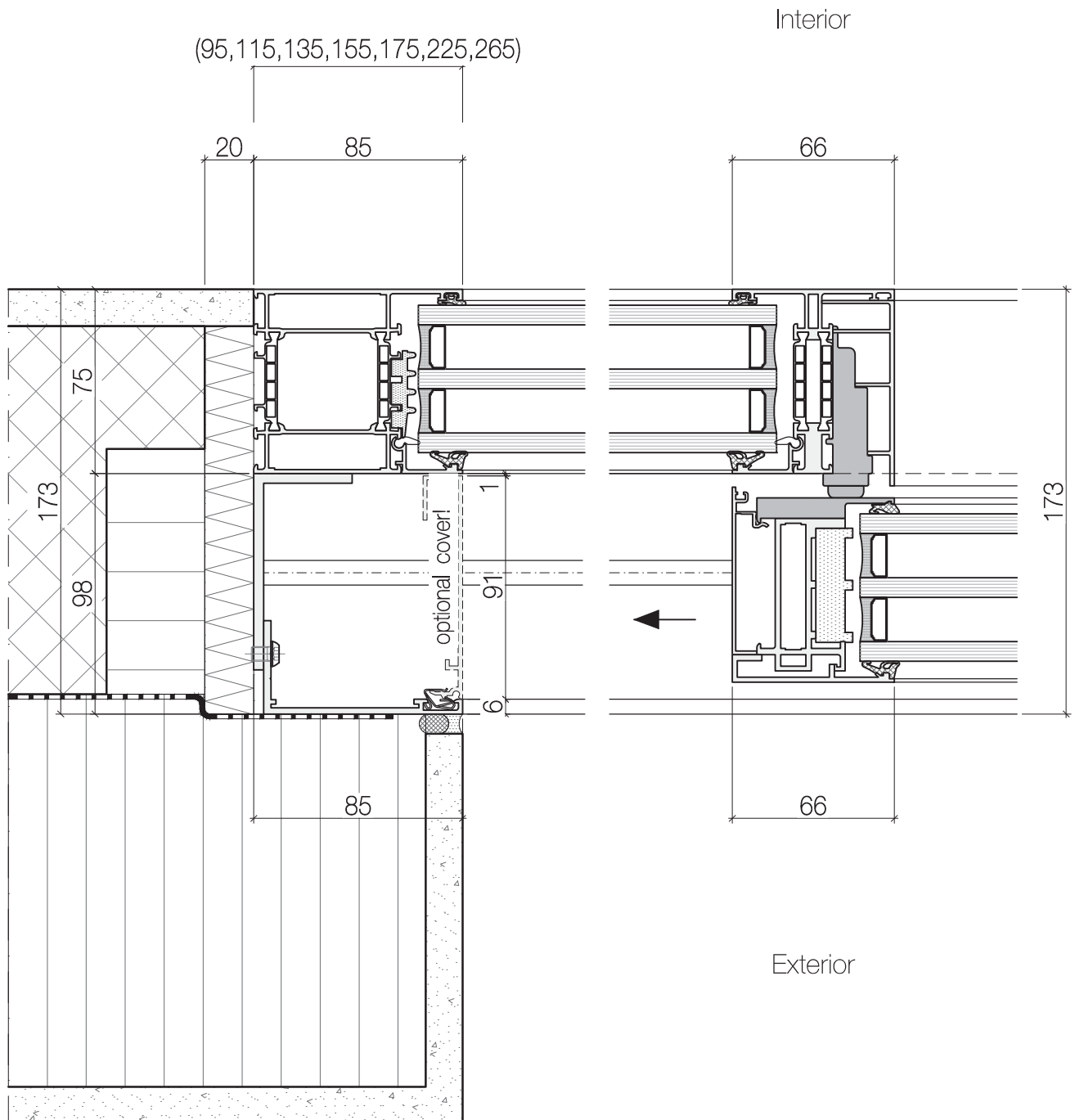
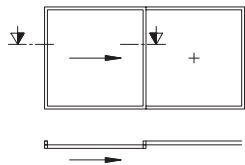
Exterior

Interior



# Horizontal sections

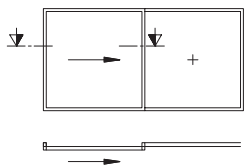
air-lux®



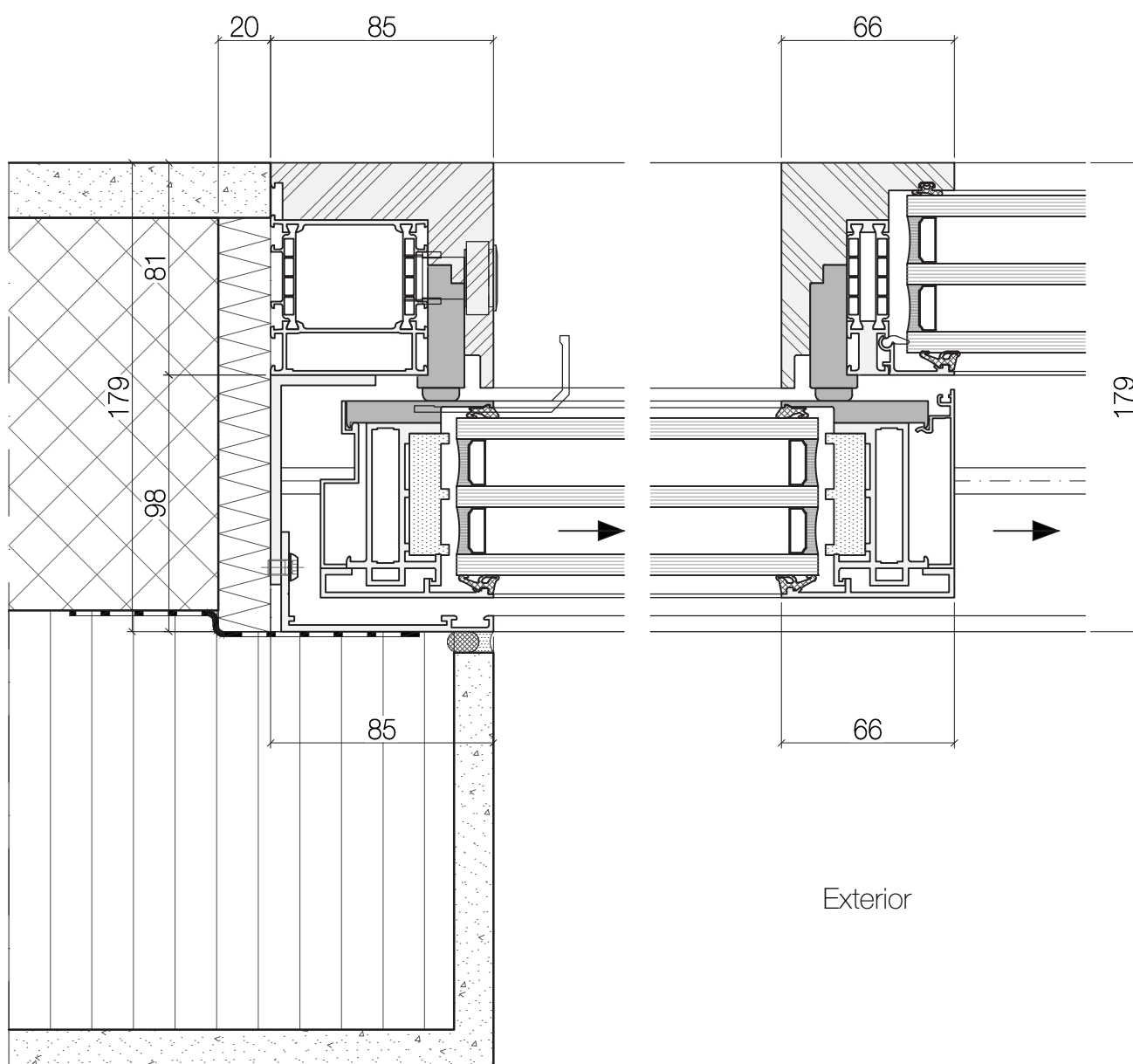


# Horizontal sections - Wood Connect

**air-lux®**



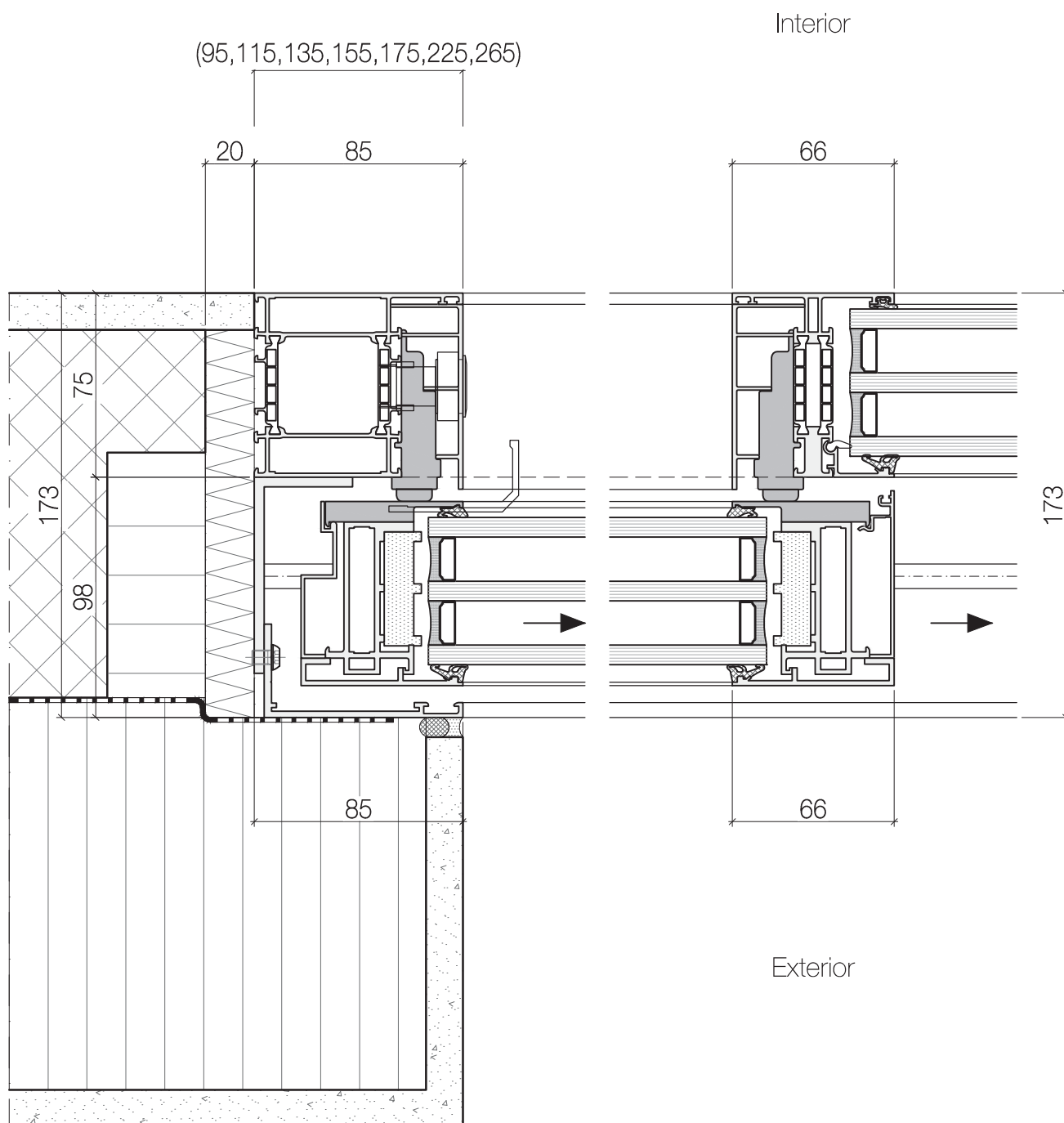
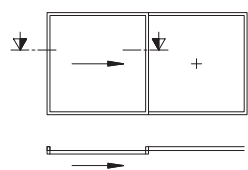
Interior



Exterior

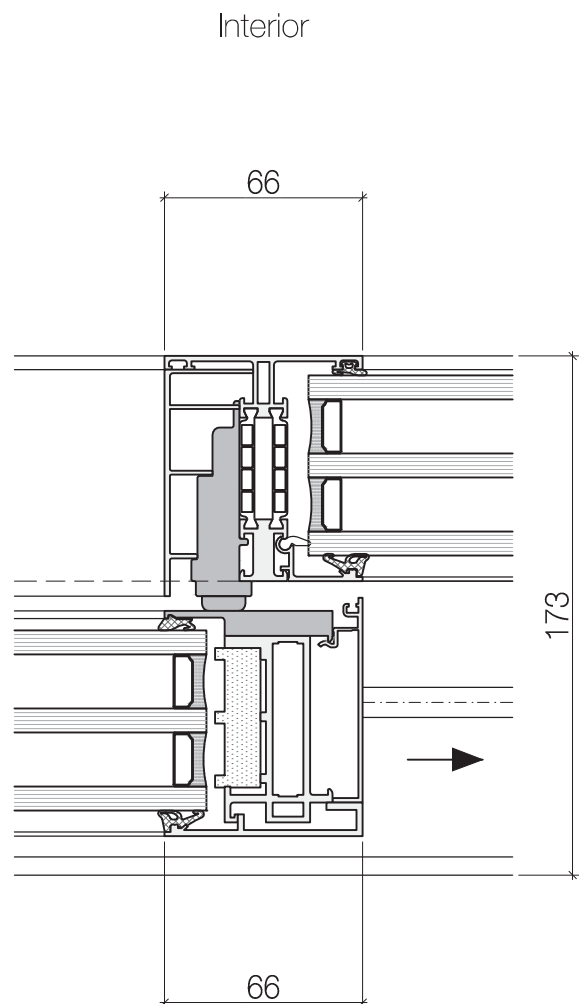
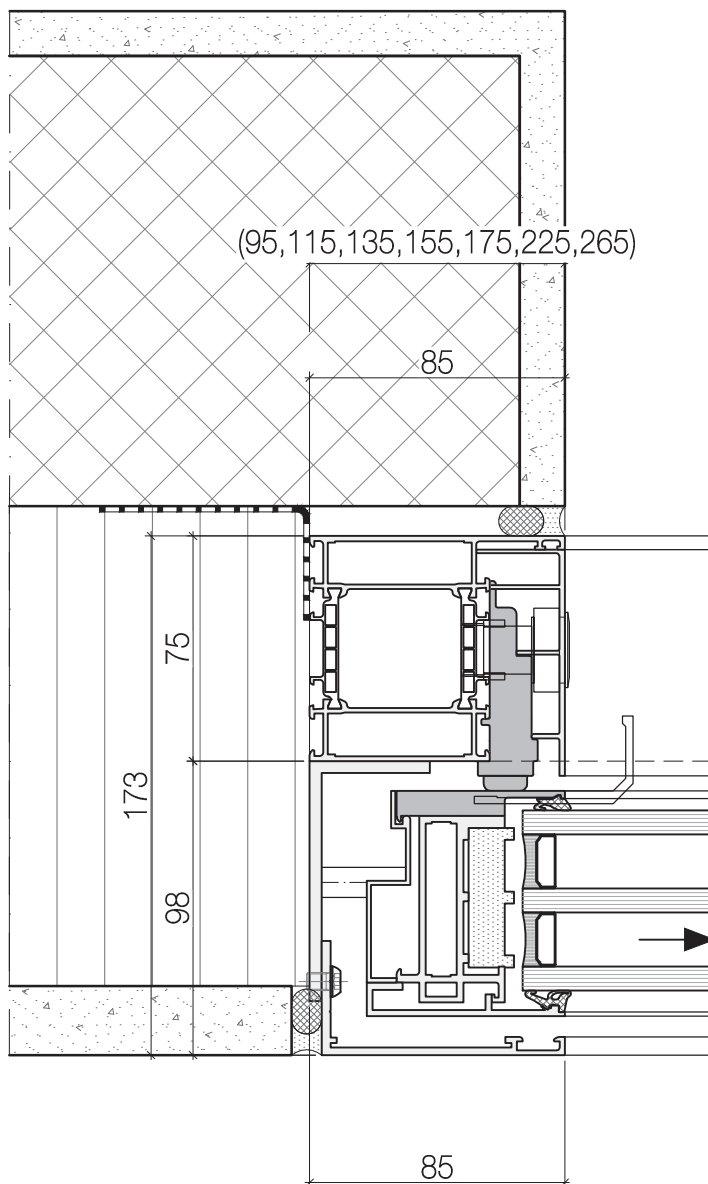
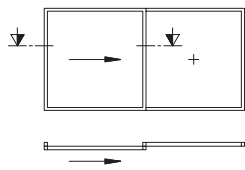
# Horizontal sections

**air-lux®**



# Horizontal sections

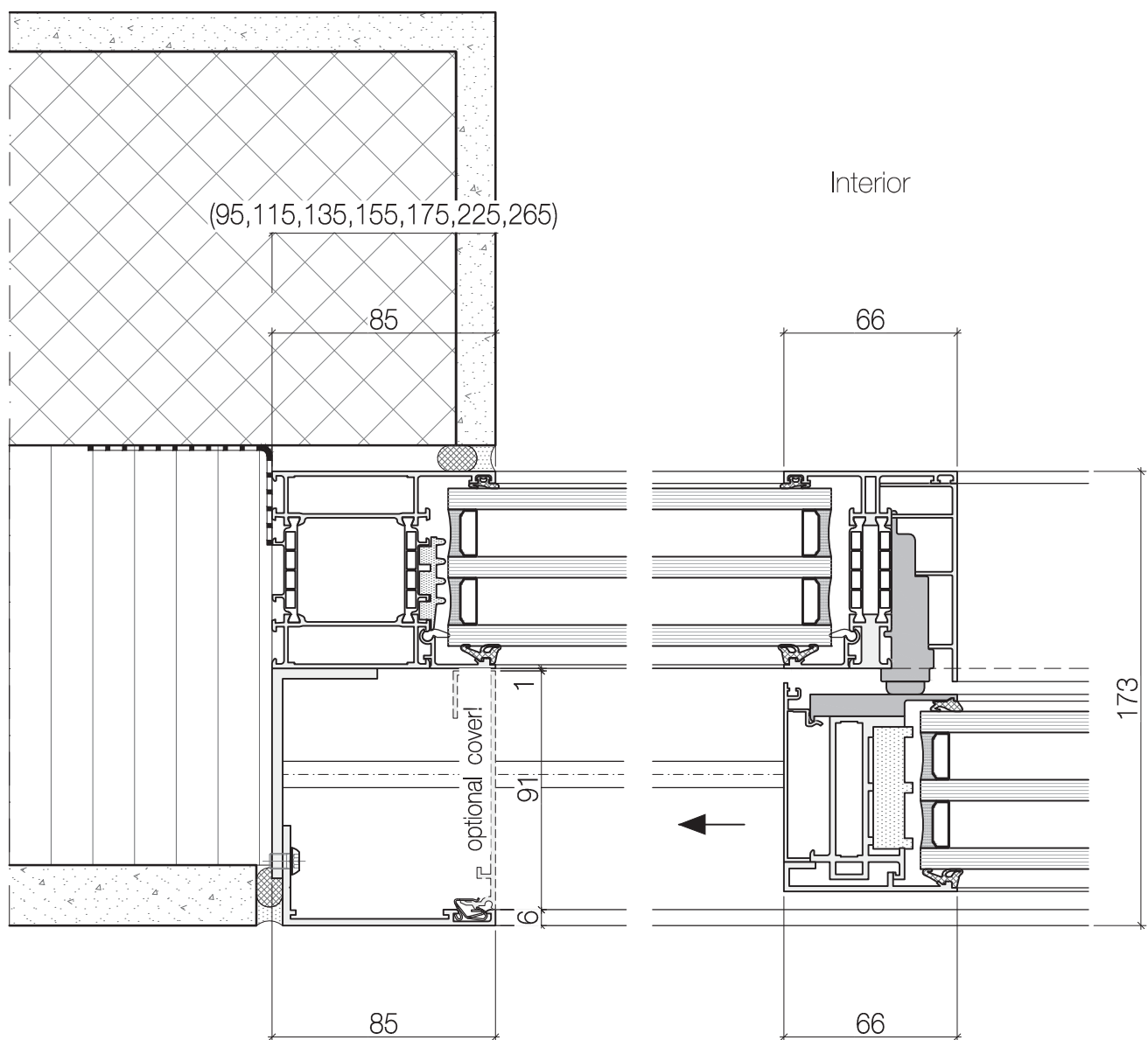
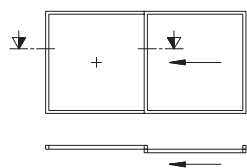
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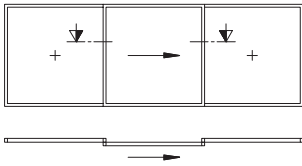
# Horizontal sections

**air-lux®**

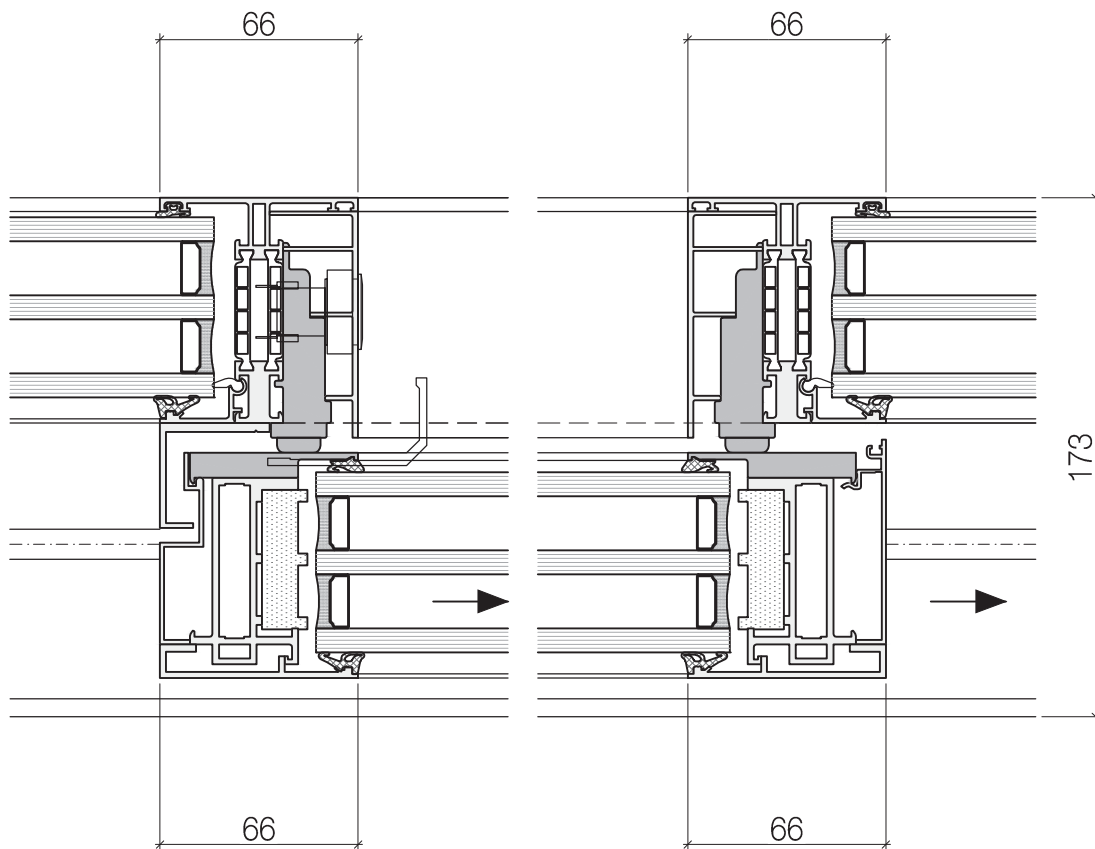


# Horizontal sections

air-lux®



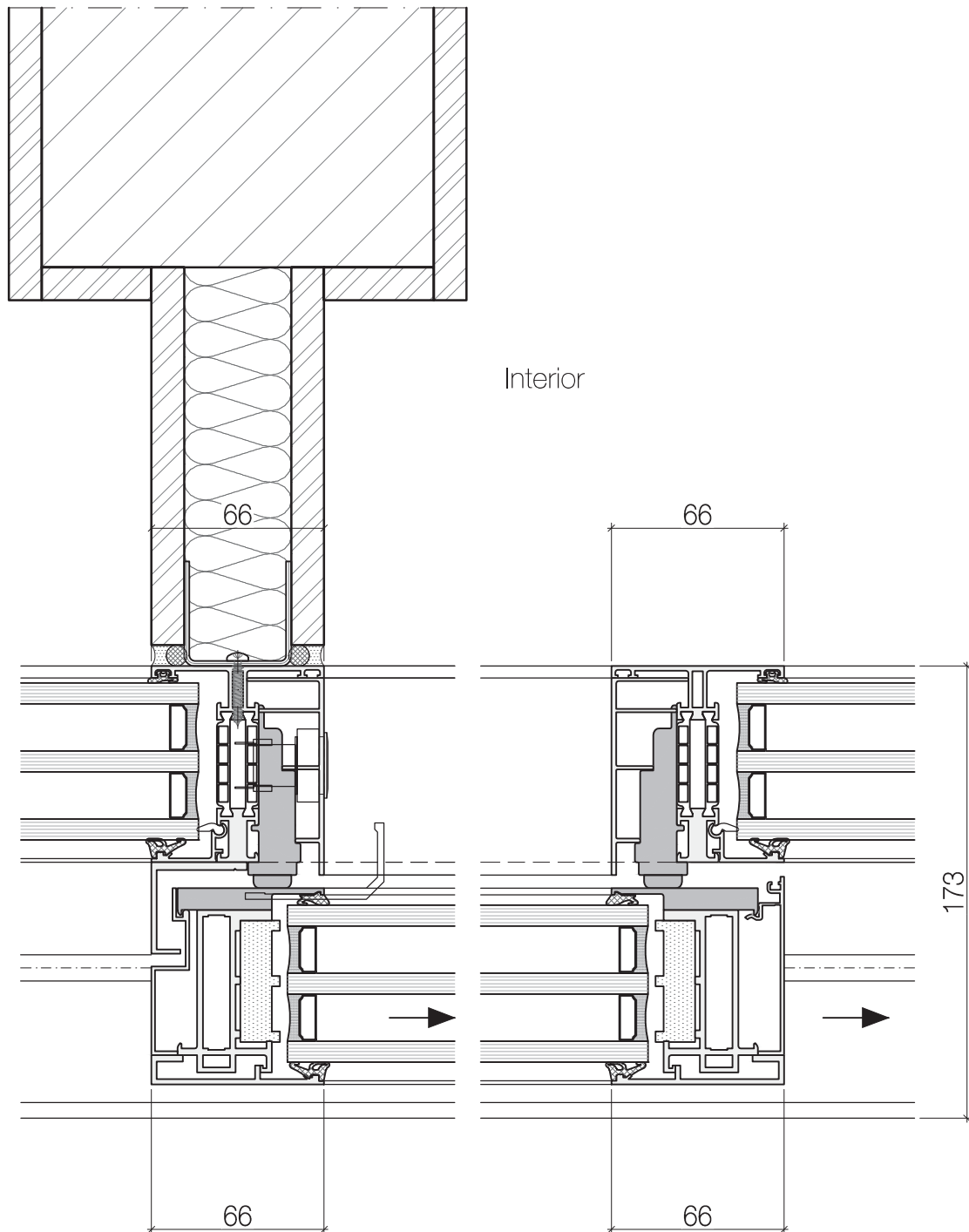
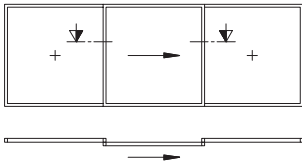
Interior



Exterior

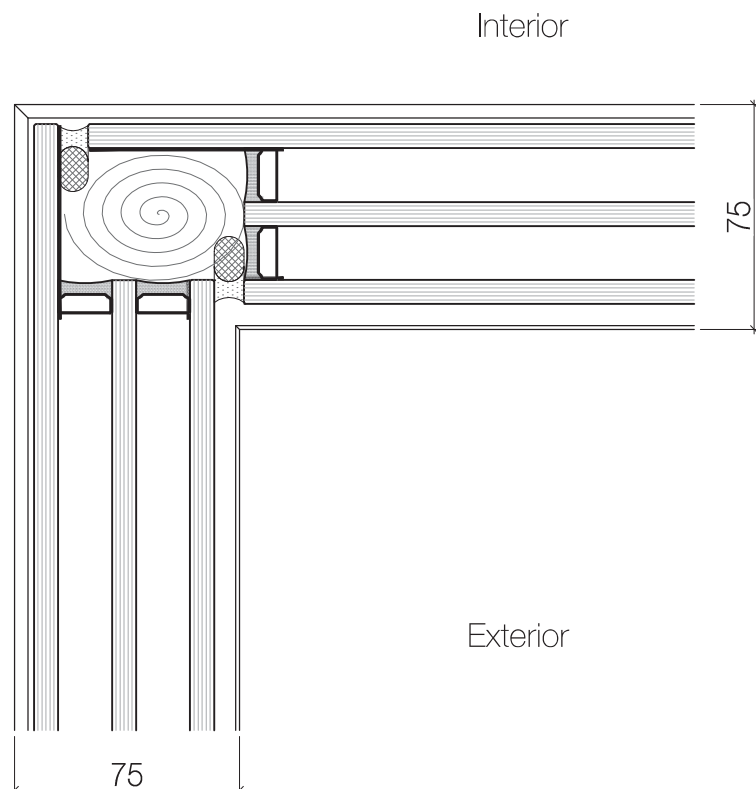
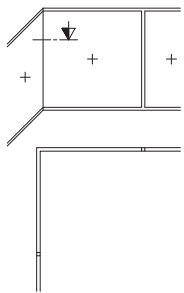
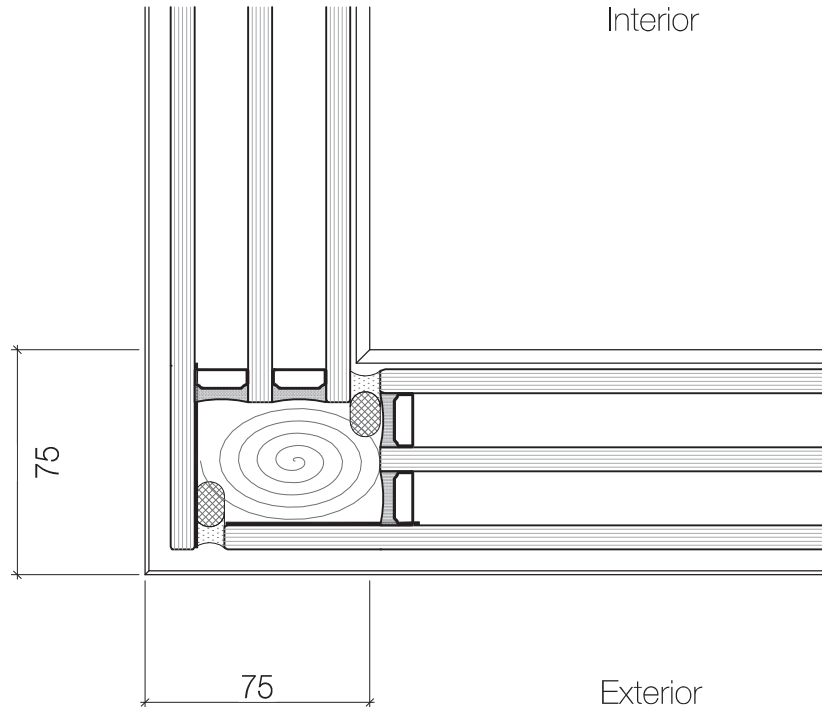
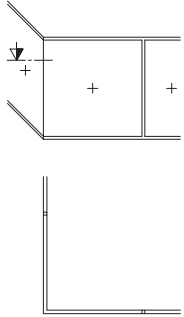
# Horizontal sections

air-lux®



# Corner solutions - Fix / all glass

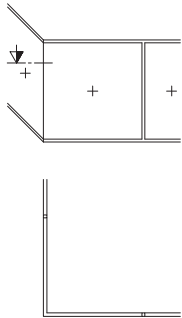
**air-lux®**



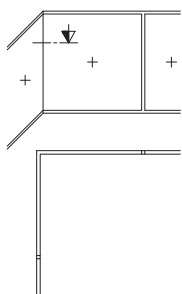
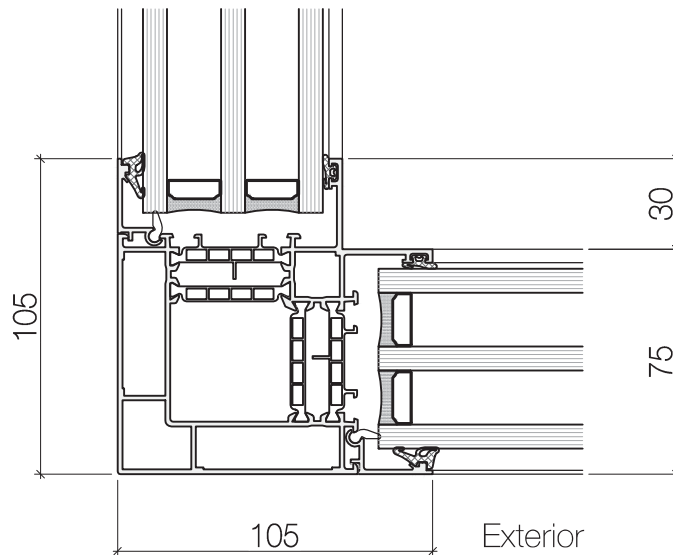


# Corner solutions - Fix / post

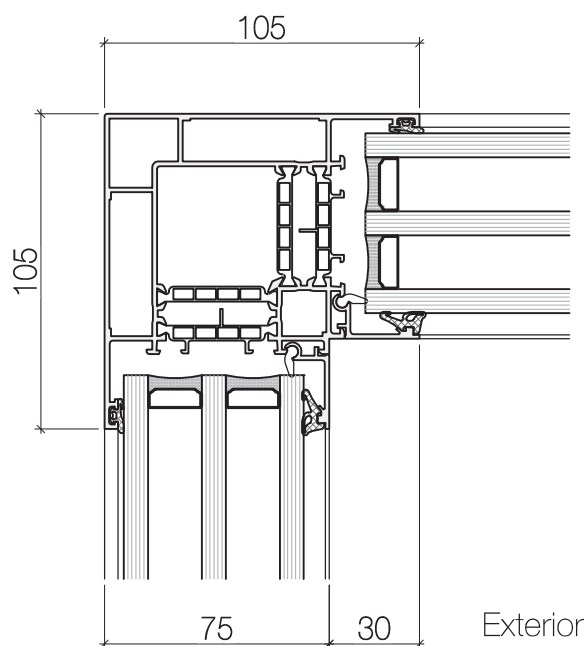
**air-lux®**



Interior

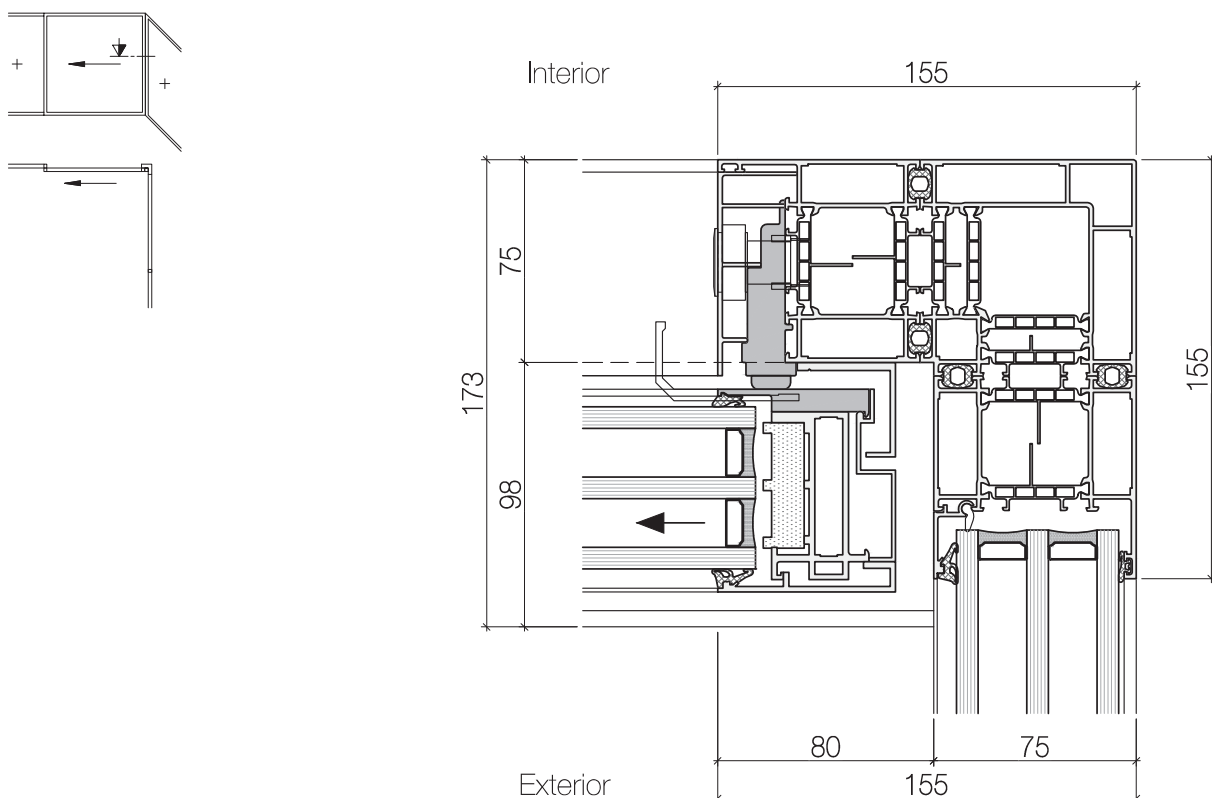
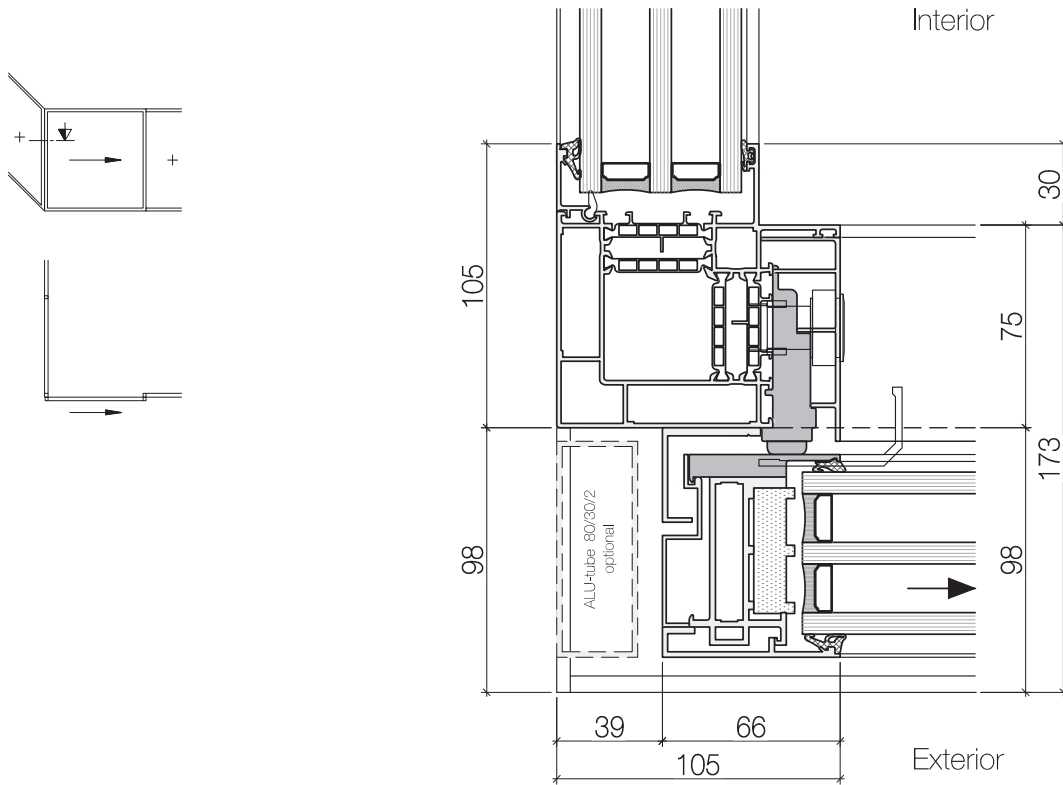


Interior



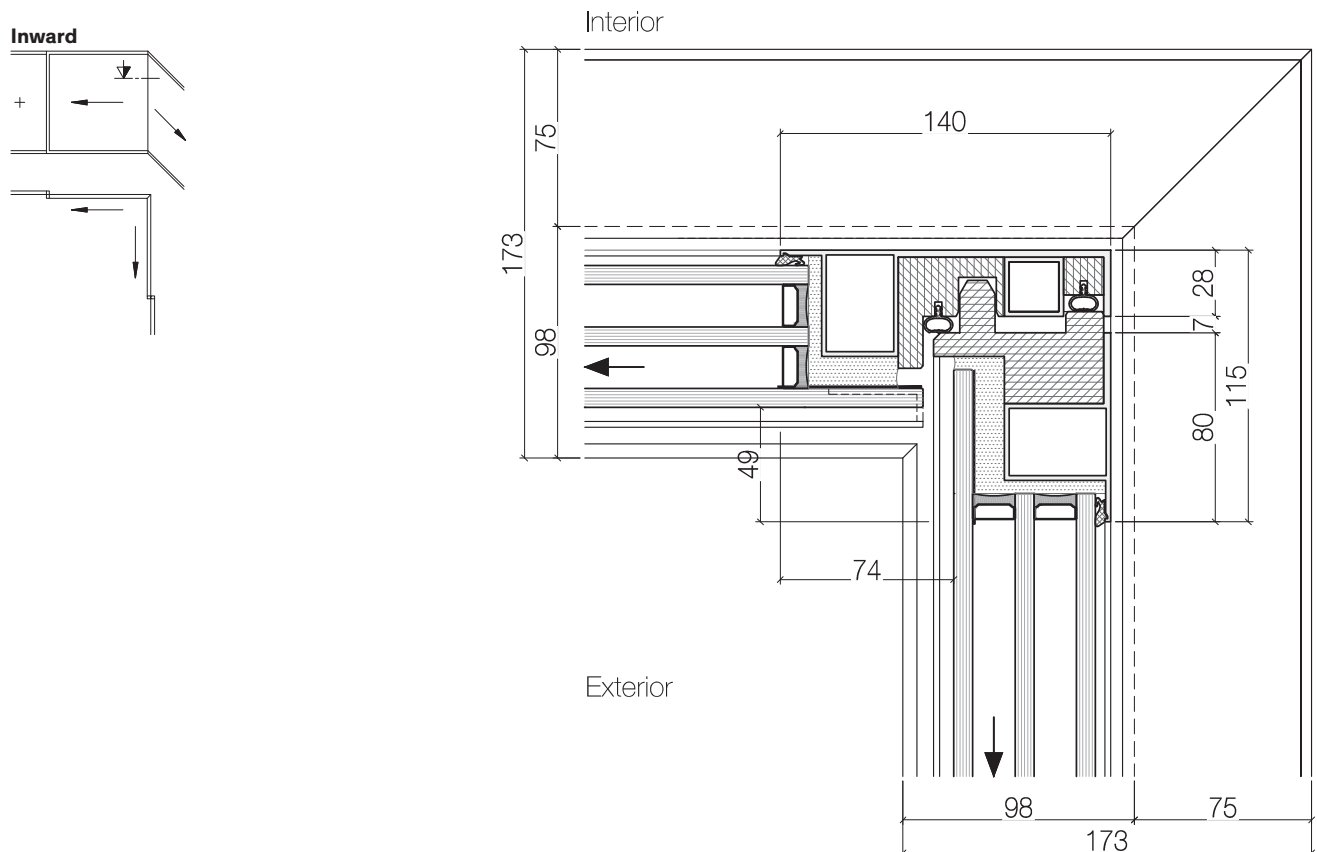
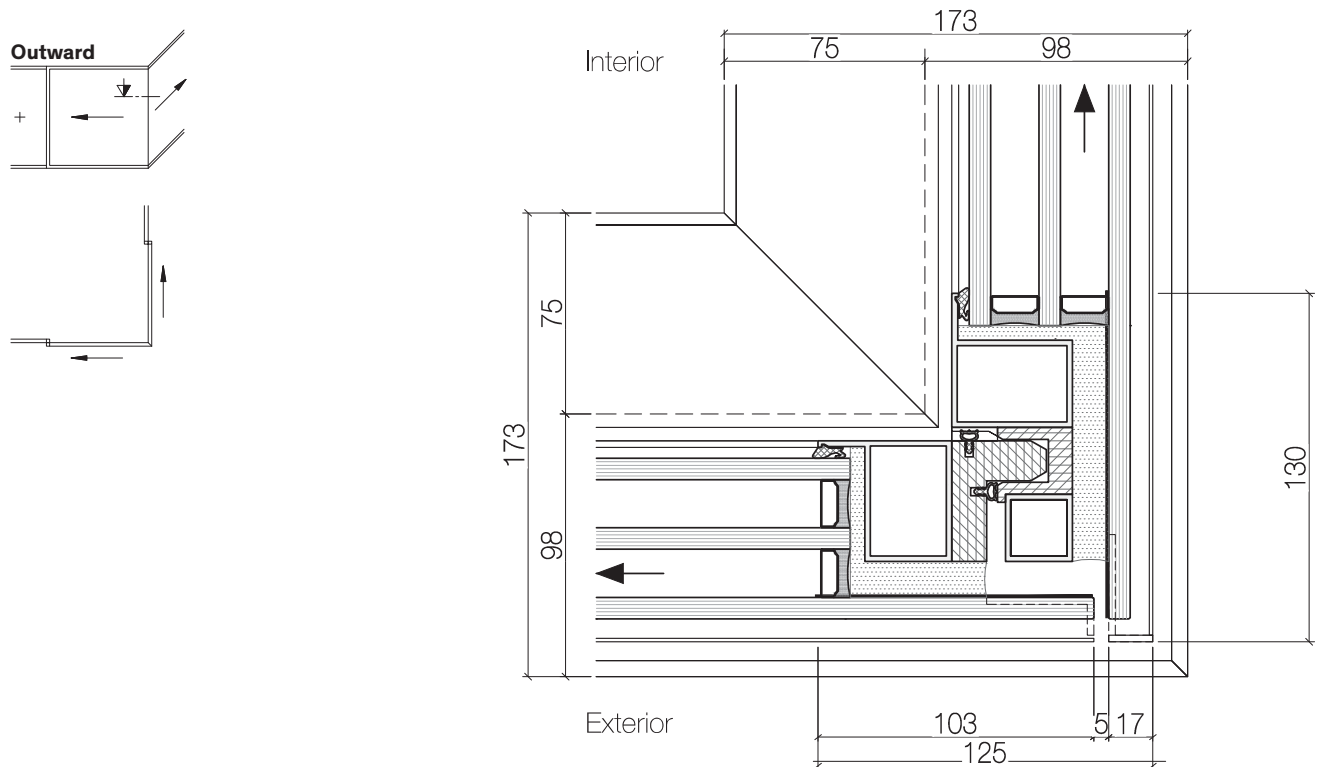
# Corner solutions - One fixed one slide

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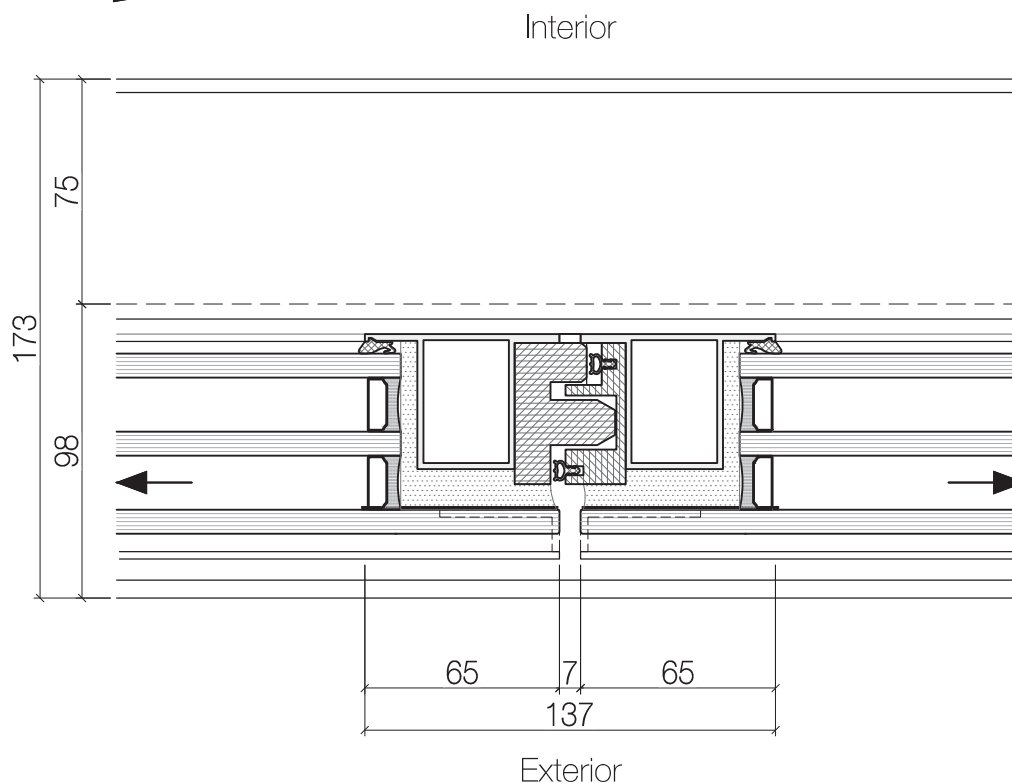
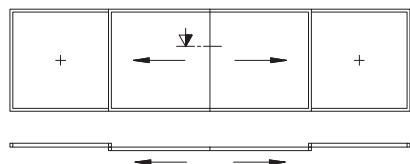
# Corner solutions - Post free / all glass

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# Integral automation, Horizontal sections - Bi-parting / all glass

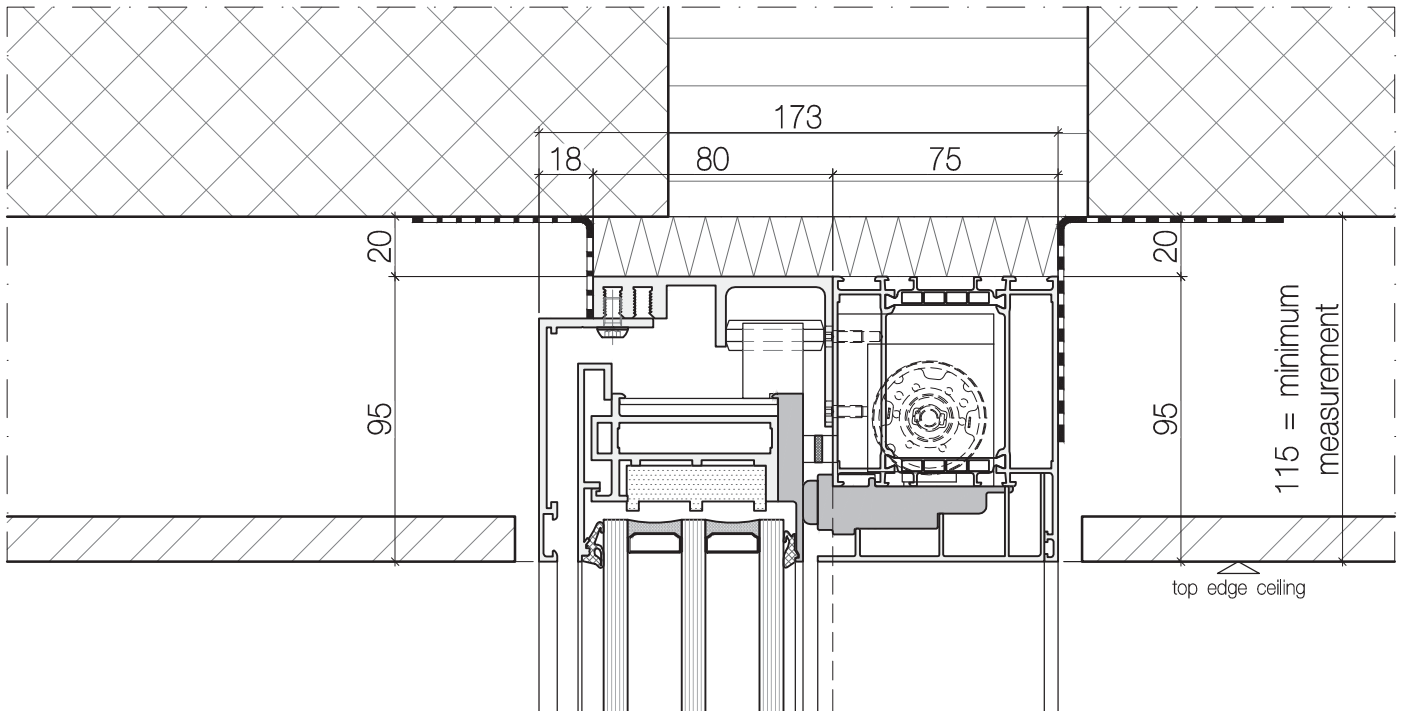
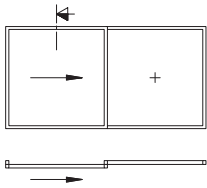
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# Integral automation, Vertical sections

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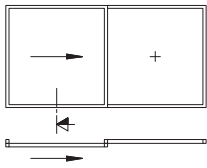
Exterior

Interior



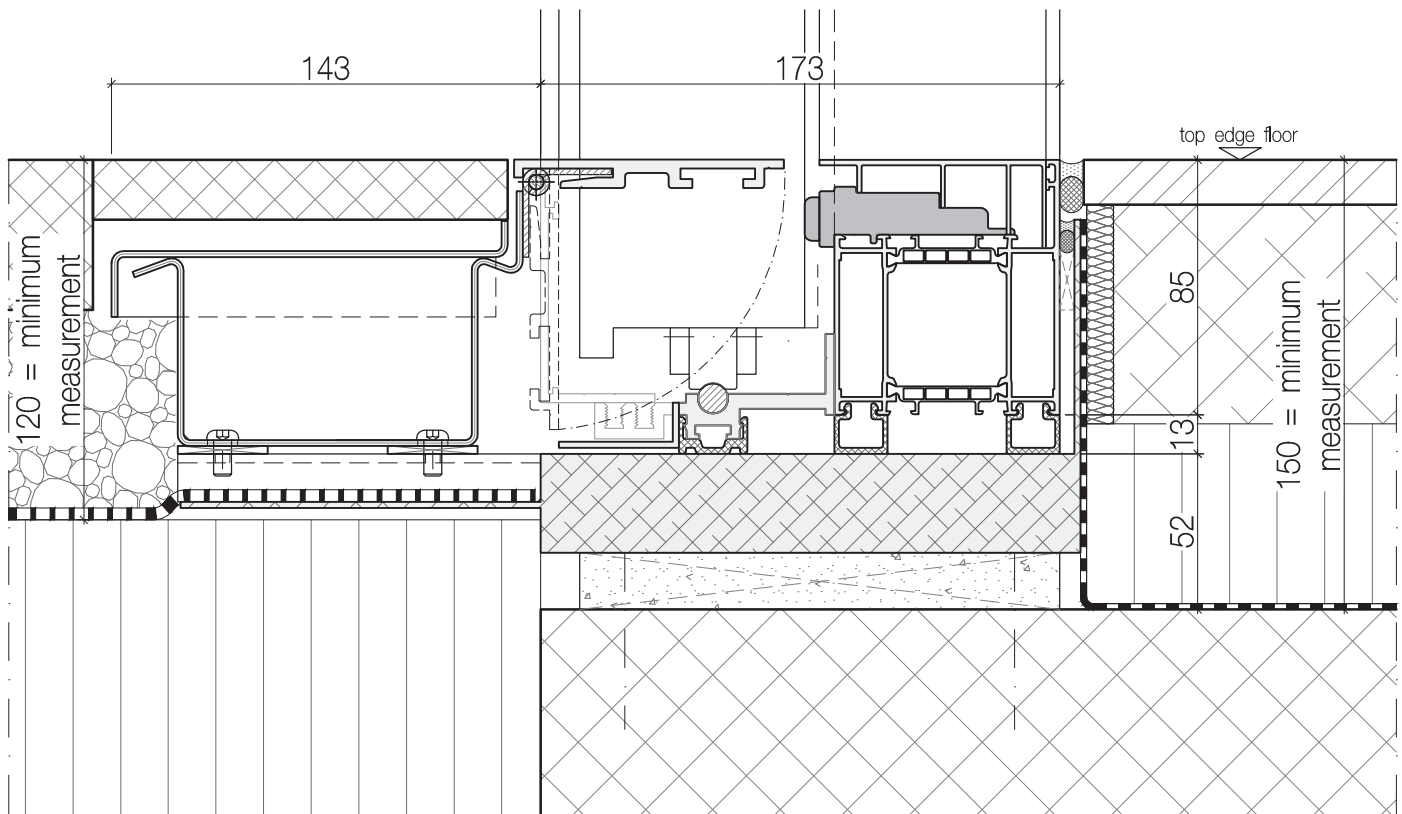
# Bottom Flip panel

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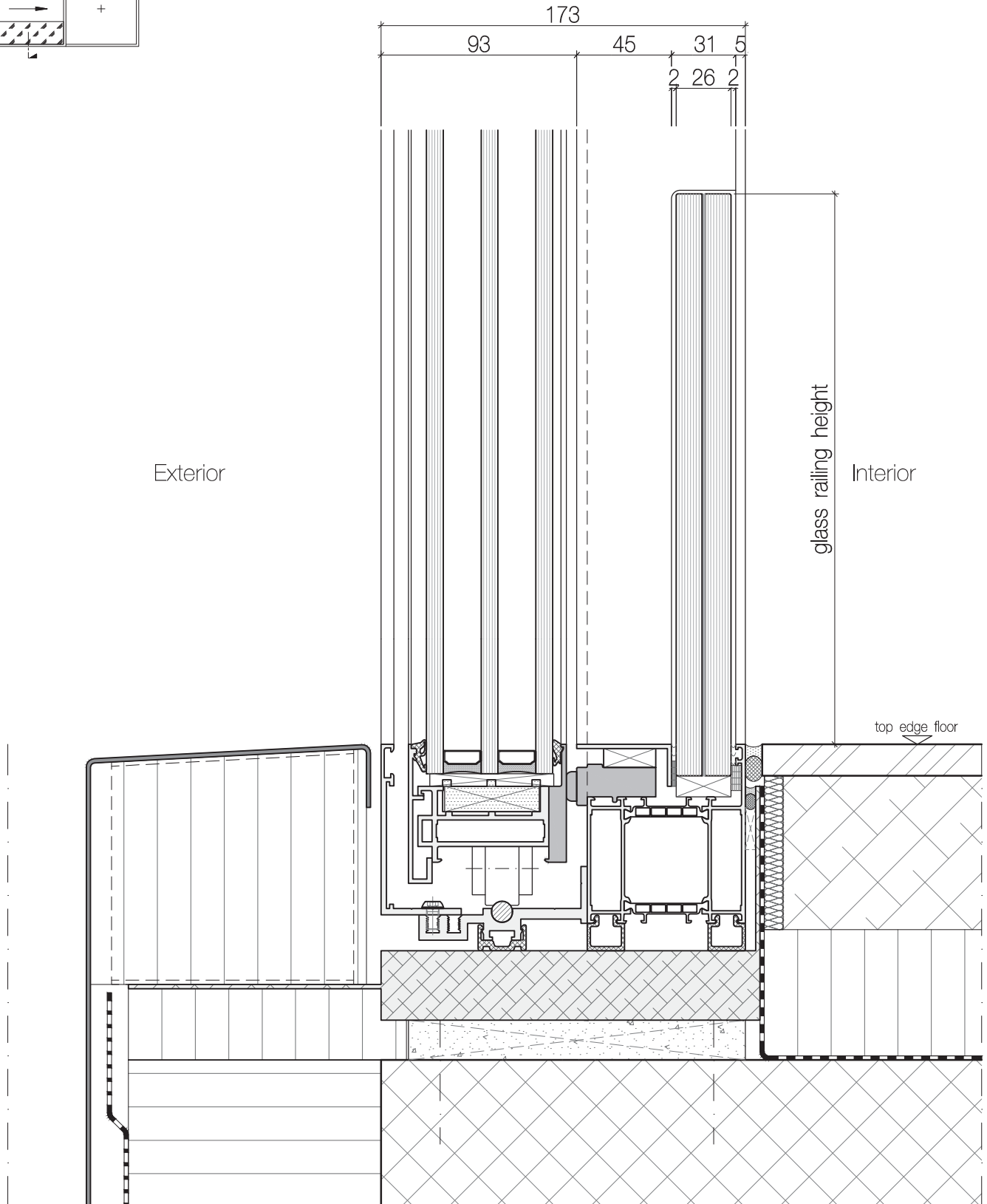
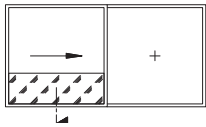
Exterior

Interior



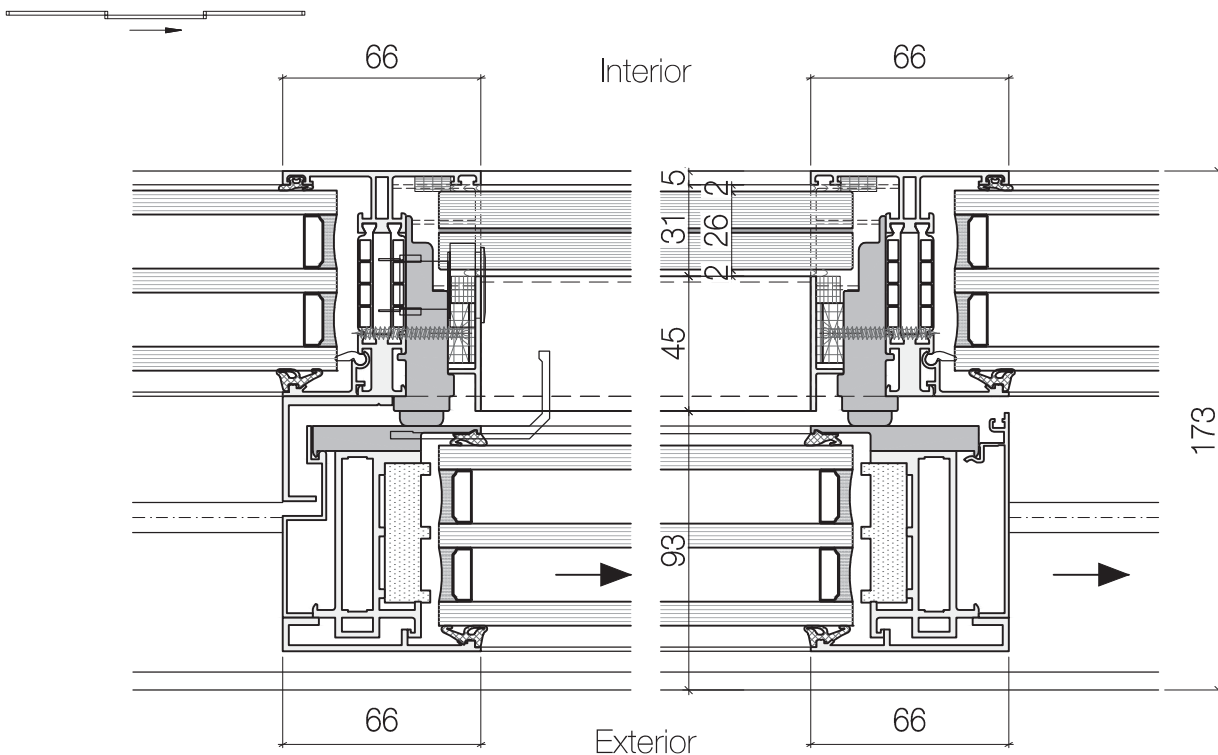
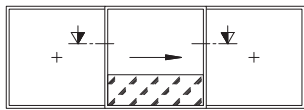
# Glass balustrade, fall protection

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# Glass balustrade, fall protection

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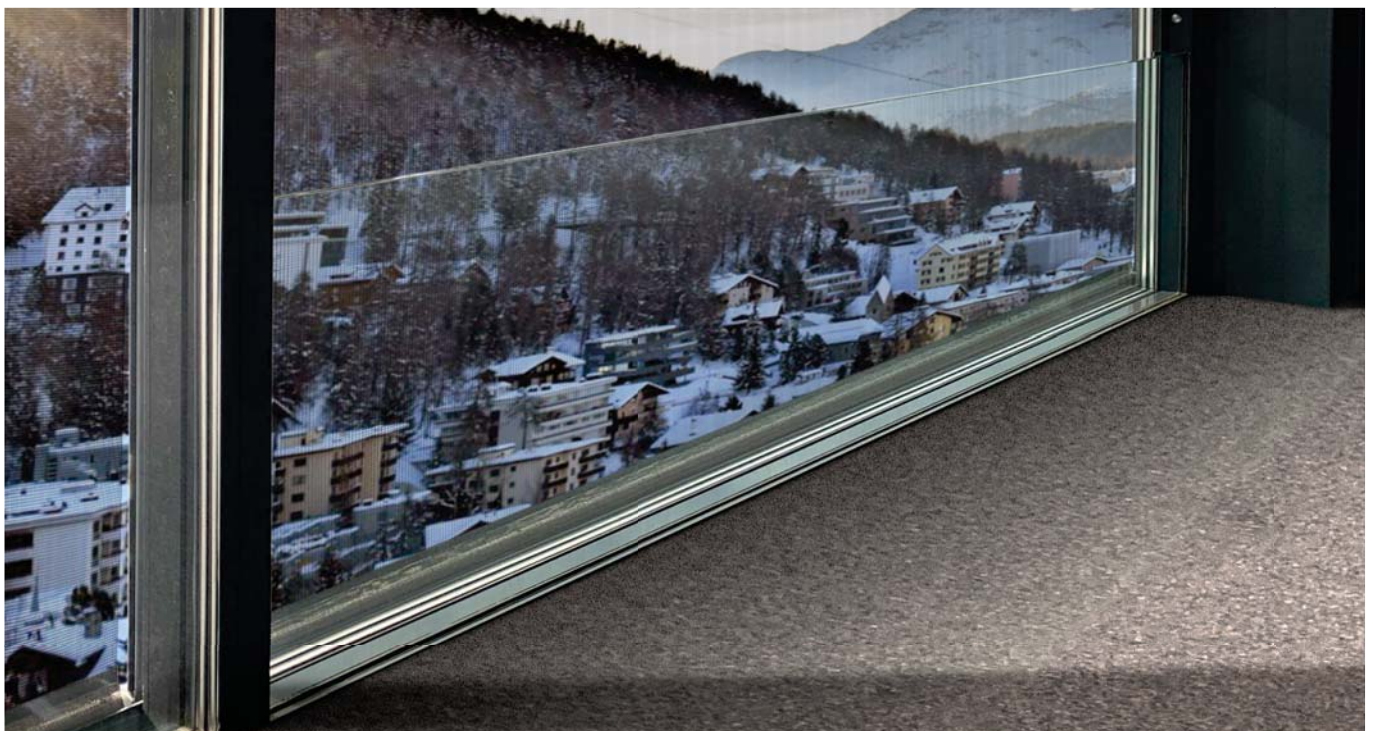


## Detail glass railing

Clear width up to 2400mm: glass thickness 21mm

Clear width up to 3100mm: glass thickness 26mm

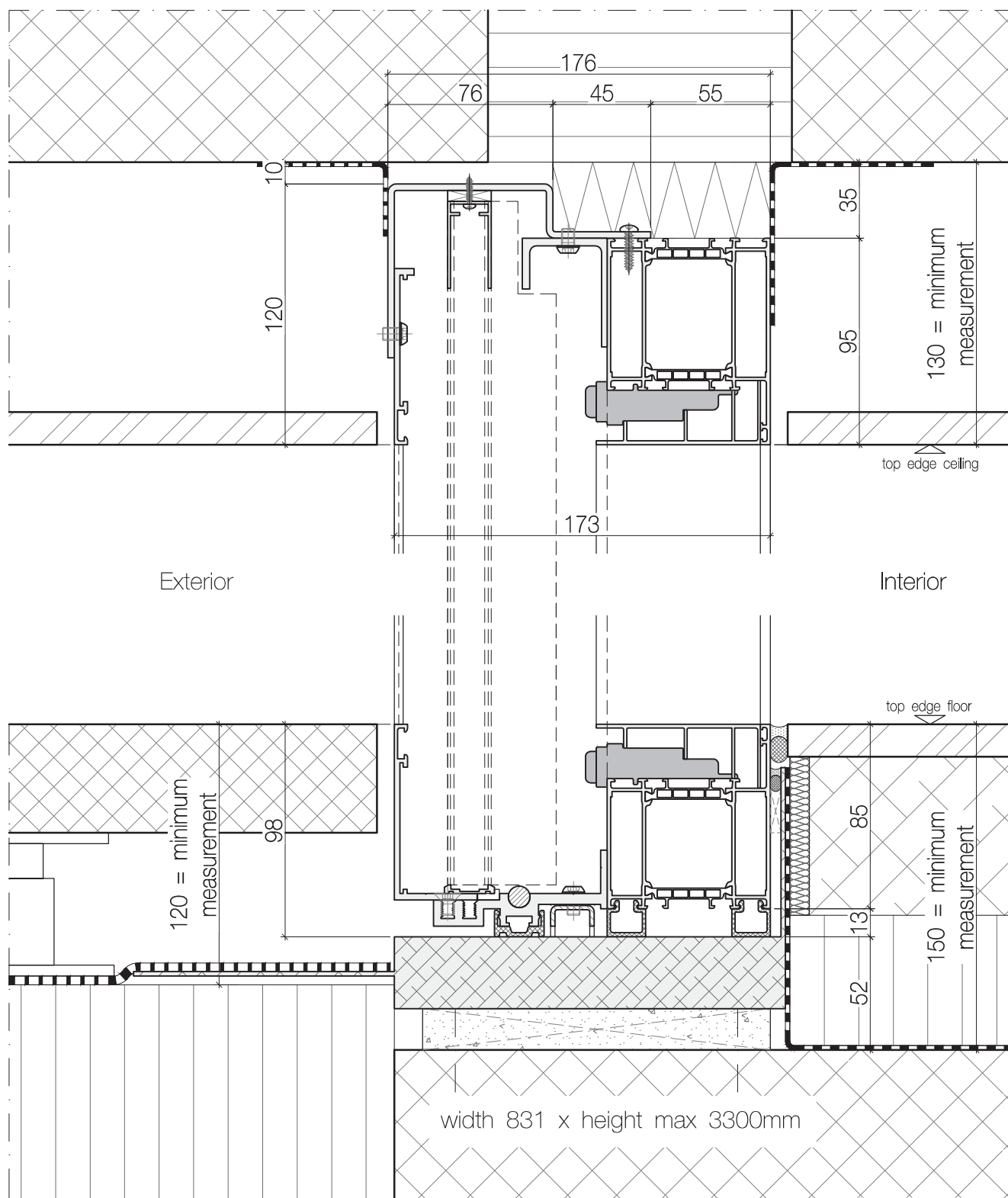
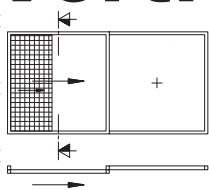
Clear width up to 4400mm: glass thickness 31mm





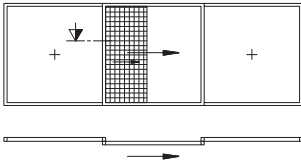
# Insect screen, Vertical sections

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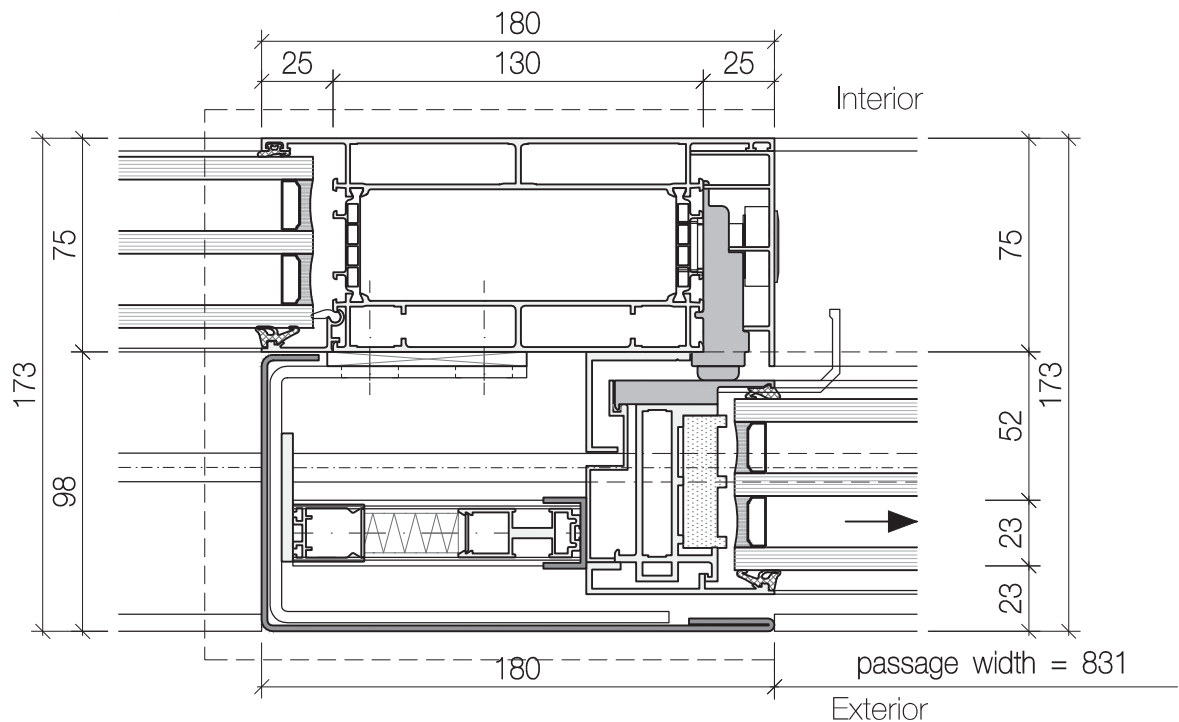


# Insect screen, Horizontal sections

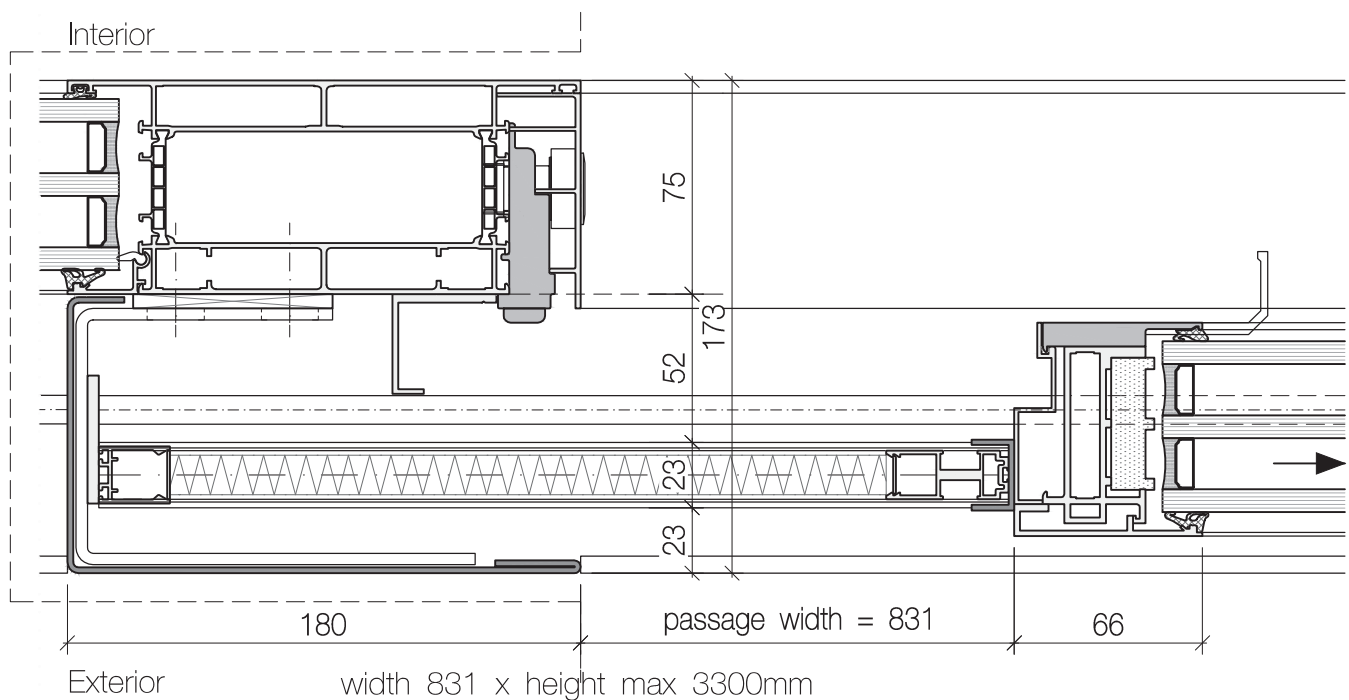
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detail closed sliding casement

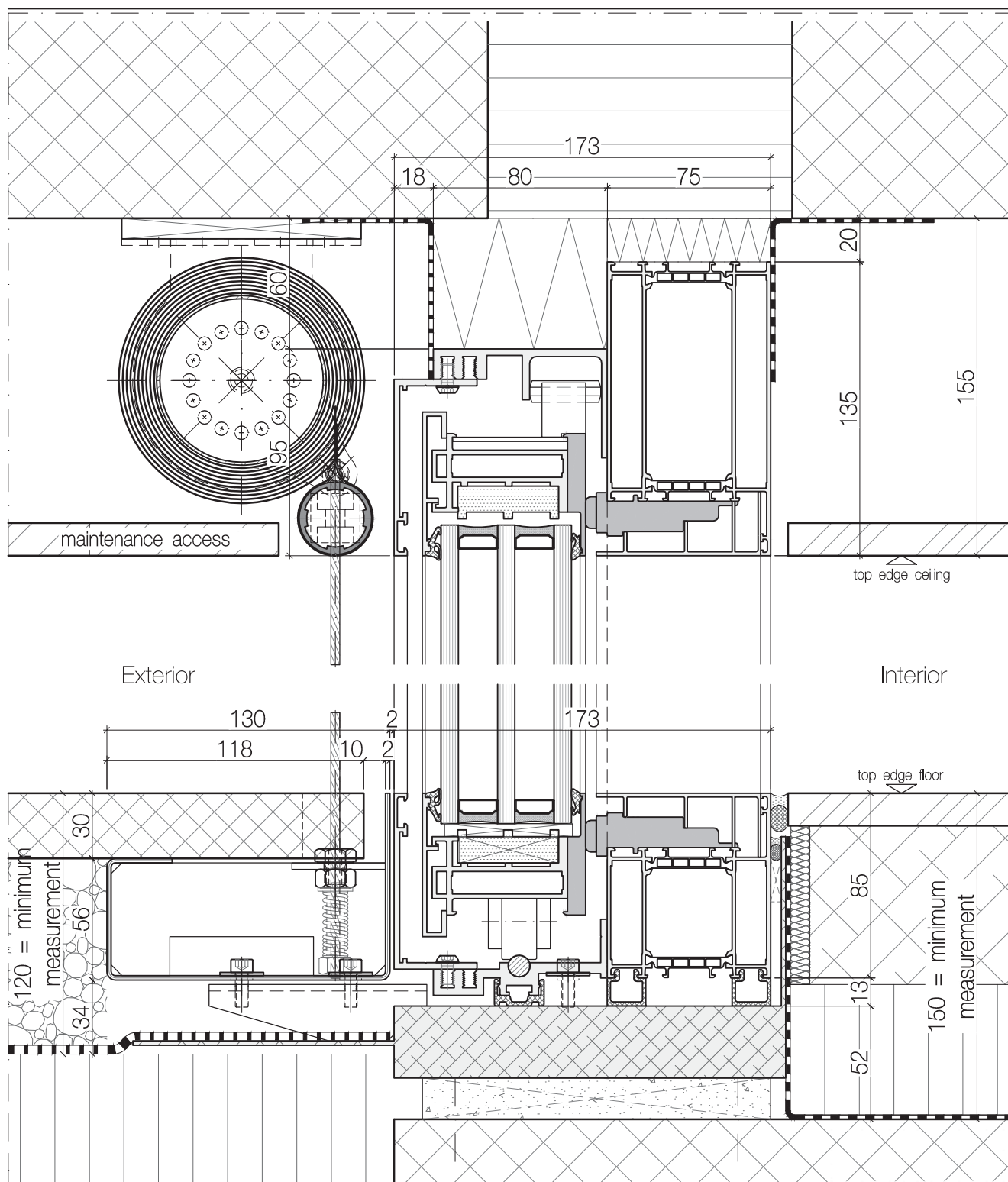
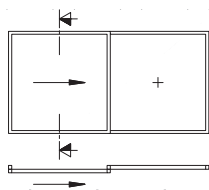


detail open sliding casement



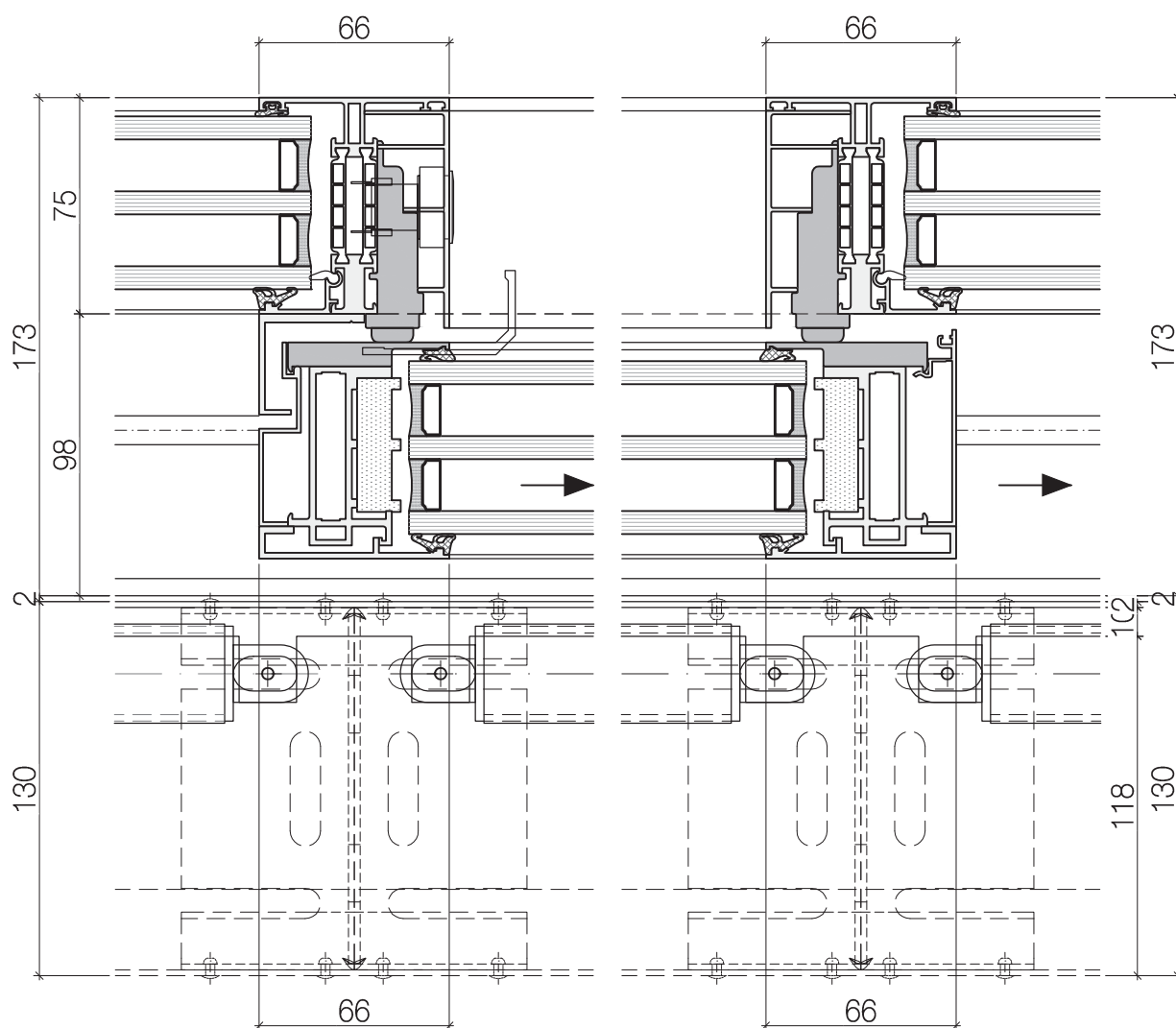
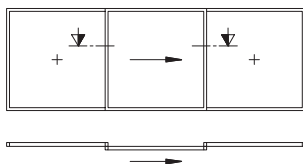
# Outside sunscreen, Vertical sections

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# Outside sunscreen, Horizontal sections

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# Transport Packaging

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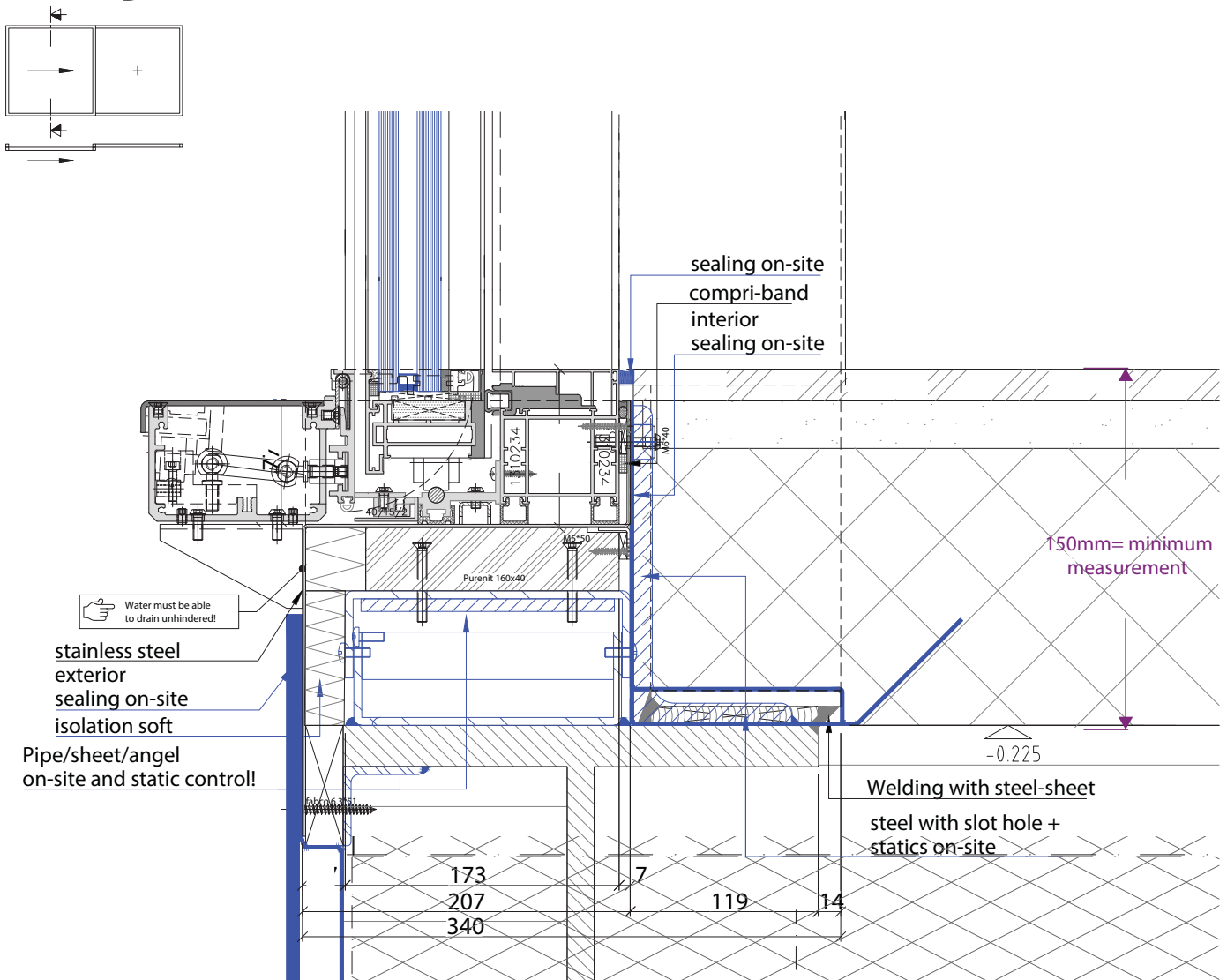
# Drainage System

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# Horizontal sections - Project detail

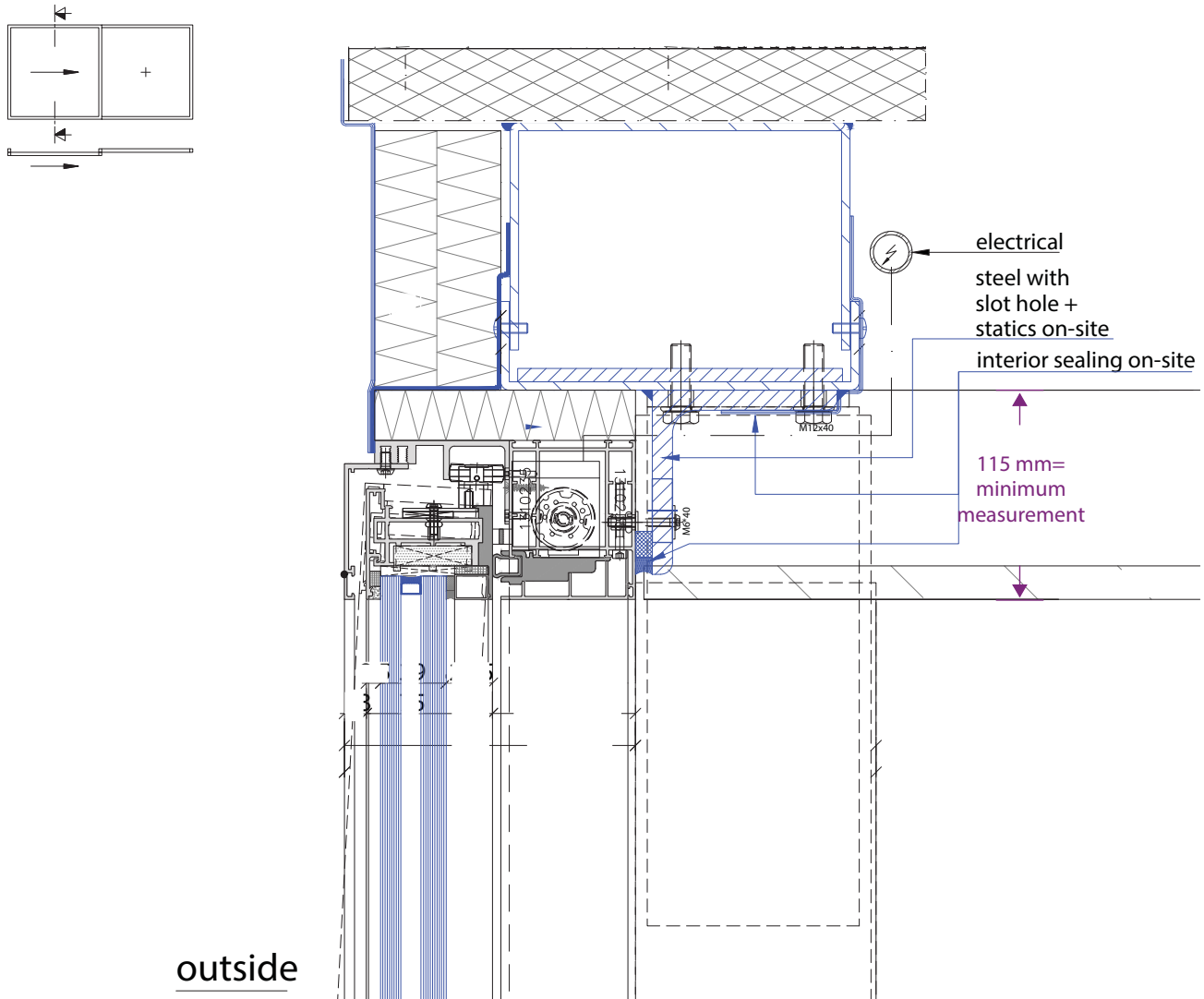
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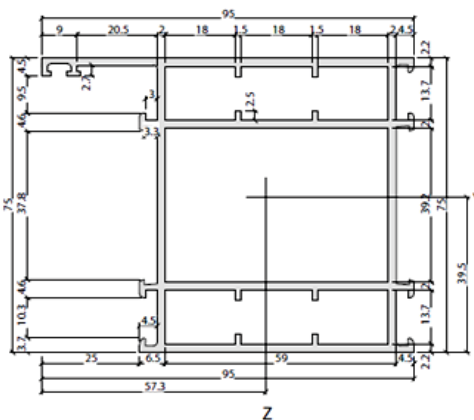
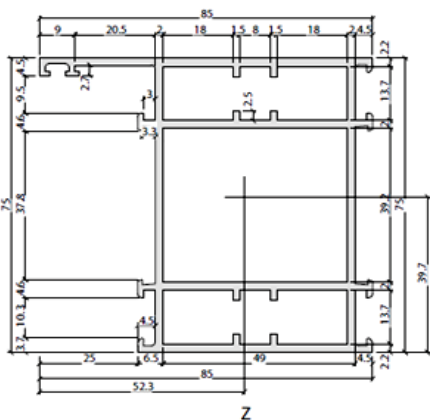
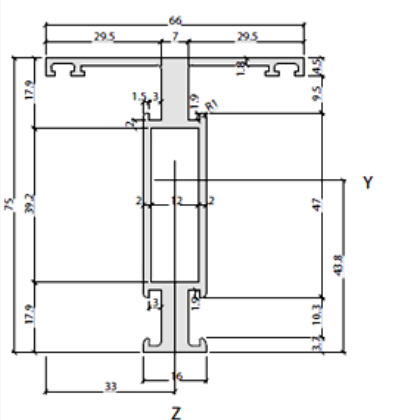
# Vertical sections - Project detail

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# Aluminum Profiles - Hong Kong Version

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KRAPF	Kom.Nr. -	Zch. Nr. 001	Planer MH	Datum 02.07.2019	Objekt: Bauteil: air-lux Profile für Hong Kong
<p>Profil-Bezeichnung / NR.: L-Profil 95mm Referenz-Nr.: Hong-Kong Profile Material = AW 6060 - T66</p>  <p><math>I_y = 7.3286E+05 \text{ mm}^4</math>   <math>I_z = 6.0865E+05 \text{ mm}^4</math> <math>W_y = 1.8546E+04 \text{ mm}^3</math>   <math>W_z = 1.0631E+04 \text{ mm}^3</math> <math>A = 944 \text{ mm}^2</math>   <math>G = 2.55 \text{ Kg/m}</math></p>	<p>Profil-Bezeichnung / NR.: L-Profil 85mm Referenz-Nr.: Hong-Kong Profile Material = AW 6060 - T66</p>  <p><math>I_y = 6.5718E+05 \text{ mm}^4</math>   <math>I_z = 4.1921E+05 \text{ mm}^4</math> <math>W_y = 1.6549E+04 \text{ mm}^3</math>   <math>W_z = 8.0173E+03 \text{ mm}^3</math> <math>A = 860 \text{ mm}^2</math>   <math>G = 2.323 \text{ Kg/m}</math></p>	<p>Profil-Bezeichnung / NR.: T-Profil 66mm Referenz-Nr.: Hong-Kong Profile Material = AW 6060 - T66</p>  <p><math>I_y = 4.1922E+05 \text{ mm}^4</math>   <math>I_z = 6.9705E+04 \text{ mm}^4</math> <math>W_y = 9.5618E+03 \text{ mm}^3</math>   <math>W_z = 2.1123E+03 \text{ mm}^3</math> <math>A = 600 \text{ mm}^2</math>   <math>G = 1.621 \text{ Kg/m}</math></p>			





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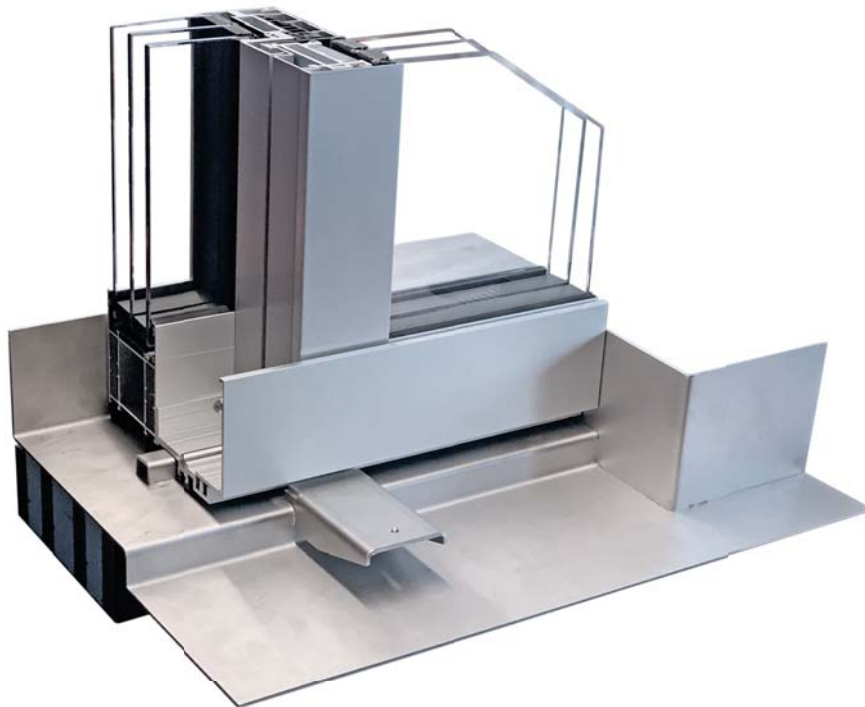
A close-up photograph of a window frame assembly. A vertical, gold-colored metal support bar is visible. Above it, a horizontal metal bracket with two circular holes is mounted. The bracket is secured with bolts. The background shows a window pane and a blue structural frame.

**Typhoon/ Steel Post with Aluminum Cover**  
aluminum cover finished matching the frame of the sliding window

# Sliding window accessories

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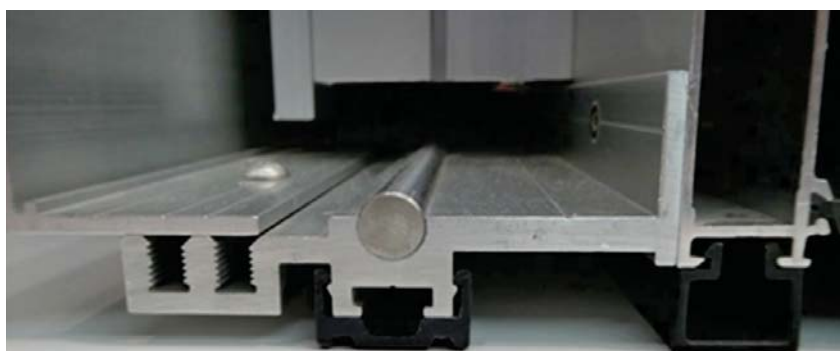
Sample demo unit



**316 stainless steel track rollers**



**316 stainless steel rod at sliding window track**



## Locking mechanism



## Air seal



Seal inactive



Seal active



## Window handle



## Push Button





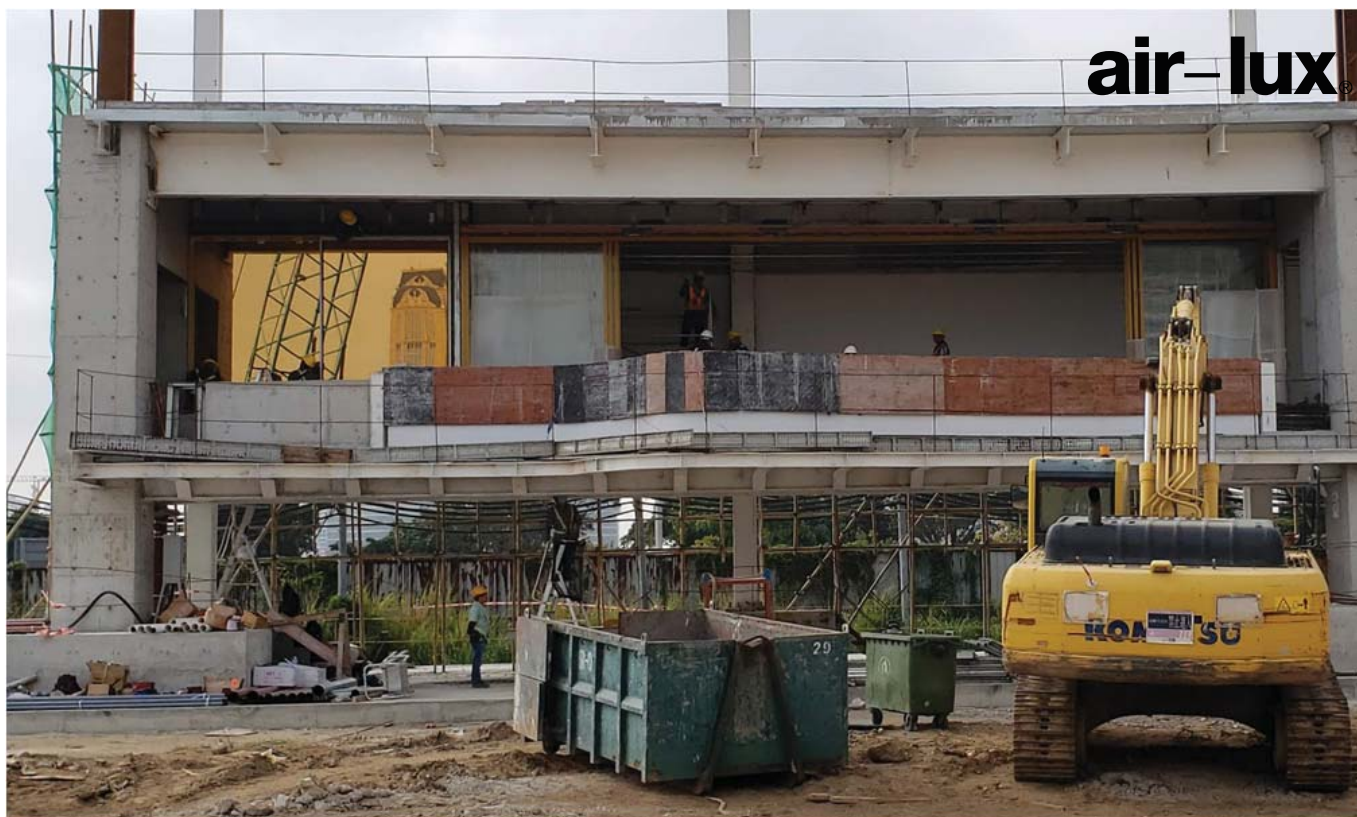
# Sliding windows/ Projects

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